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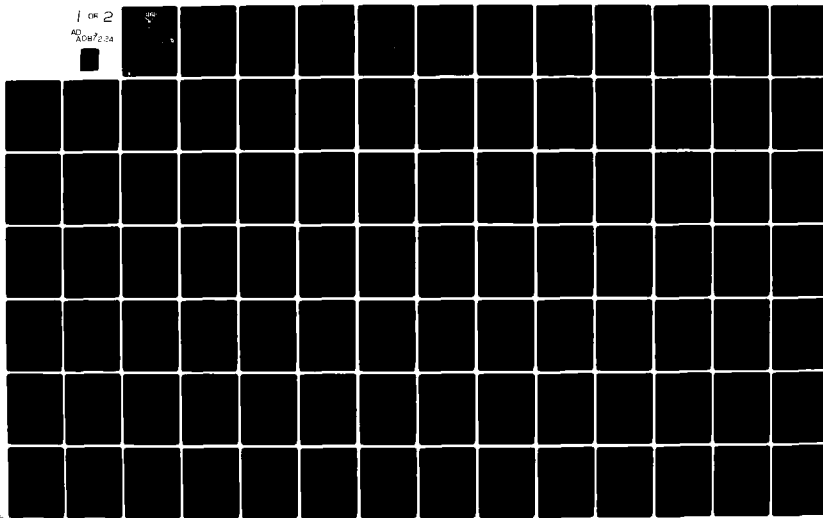
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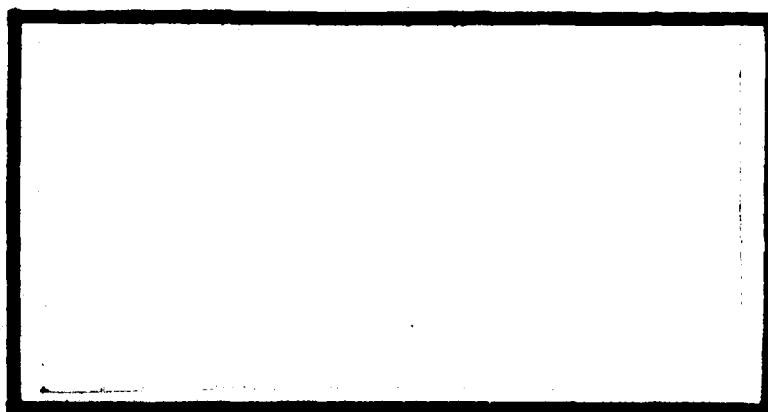
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ANALYSIS OF THE PLANNING VARIABLE AS IT  
RELATES TO THE CLOSURE OF A  
SMALL AIR FORCE UNIT

Major Robert J. Harvey, USAF  
Captain George C. Kiessling, Jr., USAF

LSSR 14-80

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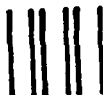
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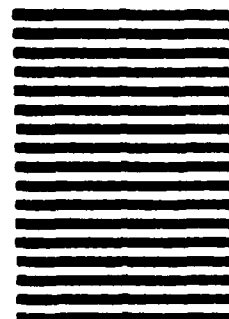
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The purpose of this study is to analyze the effect that planning has on the effectiveness of the closure process of small Air Force units. With the long-range radar site closures of Air Defense Command under the Joint Surveillance System as a model, the study analyzed and developed a complete Program Action Directive which was suggested for use under the closure process. The need for such a documented checklist arises because previous DOD efforts to streamline the small-site closure process have fallen far short of expectations. The research also strives to develop firm objectives for the closure process, measurements for these objectives, and correlations between these measures of an effective closure and the completeness of the closure plan with the suggested PAD as a basis for complete planning.

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ANALYSIS OF THE PLANNING VARIABLE AS IT RELATES  
TO THE CLOSURE OF A SMALL AIR FORCE UNIT

A Thesis

Presented to the Faculty of the School of Systems and Logistics  
of the Air Force Institute of Technology

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In Partial Fulfillment of the Requirements for the  
Degree of Master of Science in Logistics Management

By

Robert J. Harvey, BS  
Major, USAF

George C. Kiessling, Jr., BA  
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June 1980

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has been accepted by the undersigned on behalf of the  
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MASTER OF SCIENCE IN LOGISTICS MANAGEMENT  
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(Major Robert J. Harvey)

MASTER OF SCIENCE IN LOGISTICS MANAGEMENT  
(Captain George C. Kiessling, Jr.)

DATE: 9 June 1980

  
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## TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS . . . . .	iii
LIST OF TABLES . . . . .	vii
LIST OF FIGURES . . . . .	viii
 Chapter	
I. INTRODUCTION . . . . .	1
Statement of the Problem . . . . .	2
Definitions . . . . .	2
Background . . . . .	4
Scope . . . . .	7
Purpose of the Research . . . . .	13
Literature Review . . . . .	14
Thesis Outline . . . . .	19
II. METHODOLOGY . . . . .	20
Introduction . . . . .	20
Research Objective One . . . . .	20
Operational Definition Development Plan . . . . .	20
Data Gathering and Measurement Plan . . . . .	22
Research Objective Two . . . . .	23
Operational Definition Development Plan . . . . .	23
Data Gathering and Measurement Plan . . . . .	26
Research Proposition . . . . .	27

Chapter	Page
III. COMPLETENESS OF PLANNING FOR SMALL SITE DEACTIVATIONS . . . . .	30
Introduction . . . . .	30
Research Question One Results . . . . .	30
Research Question Two Results . . . . .	33
PAD Overview Section . . . . .	37
Detailed PAD Checklists by Functional Area . . . . .	44
Research Question Three Results . . . . .	44
Summary . . . . .	92
IV. RADAR SITE CLOSURE EFFECTIVENESS . . . . .	93
Introduction . . . . .	93
Research Question Four Results . . . . .	93
Research Question Five Results . . . . .	104
Measurement of Closure Objectives . . . . .	108
Responses to Questions 3c. to 3f. of Appendix C . . . . .	113
Appendix C, Question 3c. (What actions taken in deactivating ADCOM radar sites have significantly contributed to suc- cessful closures and should be repli- cated in future PADs?) . . . . .	113
Appendix C, Question 3d. (Suggestions for improving the quality of the PADs or the planning process for site closures) . . . . .	116
Appendix C, Question 3e. (What have been the main problems experienced in deactivating a radar site?) . . . . .	118
Appendix C, Question 3f. (General comments) . . . . .	122

Chapter	Page
Correlation Analysis . . . . .	122
Proposition Test . . . . .	122
Conclusion . . . . .	126
Summary . . . . .	126
V. CONCLUSIONS AND RECOMMENDATIONS . . . . .	128
Introduction . . . . .	128
Thesis Conclusions . . . . .	128
Recommendations for Management . . . . .	133
Suggested Research . . . . .	134
Summary . . . . .	135
APPENDICES . . . . .	136
A. TELEPHONE INTERVIEW INSTRUMENT FOR THE IDENTIFICATION OF THE NECESSARY INPUTS TO A COMPLETELY PLANNED PAD . . . . .	137
B. SAMPLE LETTER . . . . .	139
C. TELEPHONE INTERVIEW INSTRUMENT FOR THE IDENTIFICATION AND MEASUREMENT OF THE OBJECTIVES OF AN EFFECTIVE CLOSURE . . . . .	141
D. SAMPLE ADCOM PROGRAMMED ACTION DIRECTIVE . . . . .	144
E. SAMPLE ADCOM FORM 193 PROGRAM PROGRESS/ REVISION REPORT . . . . .	146
F. PROCESS CHART FOR SMALL UNIT DEACTIVATION . . . . .	148
G. SPSS PROGRAM FORMATS . . . . .	153
H. CRITICAL VALUES FOR $\chi^2$ . . . . .	155
SELECTED BIBLIOGRAPHY . . . . .	157
A. REFERENCES CITED . . . . .	158
B. RELATED SOURCES . . . . .	165

# LIST OF TABLES

Table	Page
1. Planning . . . . .	45
2. Manpower and Organization . . . . .	46
3. Budget . . . . .	47
4. Operations and Intelligence . . . . .	48
5. Personnel . . . . .	50
6. Logistics . . . . .	59
7. Supply . . . . .	60
8. Transportation . . . . .	65
9. Civil Engineering . . . . .	67
10. Communications-Electronics Maintenance . . . . .	73
11. Security Police . . . . .	77
12. Administration . . . . .	79
13. Medical Dispensary . . . . .	81
14. Radar Site PAD Omissions . . . . .	86
15. Specific PAD Omissions . . . . .	87
16. Importance of Objectives . . . . .	103
17. SPSS Cross-tabulation Table for Agreement Analysis . . . . .	107
18. Summary of Closure Delays . . . . .	114
19. Spearman Correlation Coefficients . . . . .	125

## LIST OF FIGURES

Figure	Page
1. Radar Site Organizational Chart . . . . .	32
2. Histogram of Omissions . . . . .	91
3. Breakout of Number of Responses by Objective . .	105



## CHAPTER I

### INTRODUCTION

For the Air Force to maintain a credible deterrent posture it must keep abreast of technological advances and an ever-changing military threat on the part of our adversaries. The cost to develop and maintain weapon systems to meet this threat continues to be high (86:Fin.8,11).<sup>1</sup> Additionally, the Air Force budget has been buffeted by inflationary pressures (86:Fin.7), has faced stiff competition for federal funds from social and other nondefense programs (86:Fin.2), and has been scrutinized by Congress and the American public for more judicious use of appropriated funds. This is still true even though President Carter's Fiscal Year (FY) 1981 federal budget calls for a 12 percent increase in military spending (87:1). To meet the challenge of a changing enemy threat while operating within tight fiscal constraints, the Air Force has found it necessary to close obsolete installations and realign missions and personnel. In fact, since 1968 the Air Force has closed 64 major installations and 962 smaller sites (86:For.1). These deactivations have contributed toward

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<sup>1</sup>The pages in the USAF Summary are labeled Fin. (Financial), For. (Forces), and Pers. (Personnel).

a reduction of 446,000 military and civilian Air Force personnel over this same time period (86:Pers.2), which is particularly significant when one considers that approximately 50.4 percent of the FY 1980 Air Force budget is marked for personnel (86:Fin.5,Pers.2). More importantly, these realignments and closures are likely to continue in the future as the Air Force adapts new strategies and tactics to meet the changing threat.

#### Statement of the Problem

Although the Air Force has closed many small installations of under 500 personnel, there does not appear to be a clear conception of the impact that the quality of planning has on these deactivations. Consequently, Air Force managers are not aware of the relationship between the quality of planning accomplished in preparation for the closure of a small installation and the subsequent effectiveness of that closure process.

#### Definitions

Key terms and abbreviations used throughout this paper which could be subject to misinterpretation are summarized as follows:

1. Case--a Programmed Action Directive (PAD) published for each deactivating radar station.<sup>2</sup>

---

<sup>2</sup>A PAD is a document containing detailed instructions, including suspense dates, for closing an Air Force installation, or taking action on several other operational requirements.

2. Effectiveness--". . . a measure of actual output against planned output. Determining effectiveness requires that some plan or standard be established before the process begins . . . [63:11]." It is concerned with the appropriateness of goals or that the right type of job is being accomplished (16:13,14).

3. Effectiveness of the closure process--includes achieving other goals besides deactivating an installation on time, such as closing the unit within budgetary constraints and the timely redistribution of manpower and materiel resources.

4. Efficiency--"a measure that relates the value of the output of the process to the value of the input [63:10]." ". . . the idea of doing well and without waste whatever is being done--whether it is worth doing or not. Efficiency focuses on how work is done [16:13]," not on what should be done (16:13).

5. Planning--

. . . the process or activity of determining in advance specifically what should be done in order to achieve particular goals, how it should be done, when and where it should be done, and who should do it [16:99].

6. Quality of Planning--for the purpose of this thesis, this term will refer mainly to the completeness of deactivation plans. However, a quality plan must consider such factors as cost, timeliness, and accuracy.

7. Semi-Automatic Ground Environment (SAGE) System--a SAGE center is one of seven air defense command and control headquarters located in Canada and the United States.

8. Small-sized installation--for the purpose of this thesis, an Air Force organization with a combined military and civilian manpower strength of 500 persons or less. Due to the small number of assigned personnel, it normally receives a significant amount of its logistical and other support (e.g., civil engineering, accounting and finance, budget, personnel, administrative) from a geographically-separated host base. Typically, this type of unit has a single mission and is organized as either an air base group, squadron, detachment or operating location. It may or may not be co-located on a larger military installation.

#### Background

Since this thesis has drawn heavily on Air Force's experiences in closing the 31 CONUS radar sites under the Joint Surveillance System (JSS), a background investigation into the organizational structure of our strategic air defense forces and the purpose of JSS is in order.

Until 1 September 1979, Aerospace Defense Command (ADCOM) was a Major Air Command (MAJCOM) located at Peterson Air Force Base (AFB), Colorado. It was the primary military component forming the North American Air

Defense Command (NORAD), the combined command with Canada. In fact, the ADCOM Commander served as the NORAD Commander. The ADCOM Commander exercised operational control over his forces through six Continental United States (CONUS) Air Divisions (71:1-3). The Air Divisions, in turn, controlled the radar and fighter interceptor squadrons located within their geographic area of responsibility. Even though ADCOM was officially deactivated on 1 September 1979 and its air defense mission transferred to Tactical Air Command (TAC), the Air Divisions have remained intact with their primary responsibilities of air surveillance and control and as an intermediate headquarters for air defense forces. An Air Defense Tactical Air Command (ADTAC) headquarters has been formed at Peterson AFB to be responsible for the overall management of this country's air defense forces.

As the equivalent of a Numbered Air Force element of Tactical Air Command, Air Defense Tactical Air Command is charged with providing the Commander-In-Chief of the North American Air Defense Command and Aerospace Defense Command with the control centers, radars and interceptors he needs to meet his peacetime air sovereignty and wartime air defense missions [3:18].

The objective of the JSS program is to

. . . acquire and deploy a peacetime air surveillance and control system to replace the SAGE/BUIC system for the CONUS and Canada, and the manual ground environment system in Alaska. . . [36:1].

Under the auspices of NORAD, JSS will consist of seven Region Operations Control Centers (ROCCs) and 83 sensor or

radar sites located throughout the CONUS, Alaska and Canada. The purpose of the ROCCs will be to provide command, control, communications, and surveillance during peacetime while transferring command and control functions to Airborne Warning and Control Systems (AWACS/E-3A) aircraft during wartime. Of the 45 sensor sites in the CONUS, 31 will be joint Federal Aviation Administration and United States Air Force (FAA/USAF) sites and five will be FAA solely owned and operated sites (36:1). Therefore, the advent of AWACS along with the construction of new joint use and FAA owned sensor sites has enabled the USAF to close its many obsolete radar sites (36:1).

Within ADCOM/ADTAC, where 31 radar sites will be closed by 1980, the persons queried agreed that the lack of planning has hindered the orderly closure of many of these sites. Colonel Ravetti, ADCOM Comptroller, said that numerous schedule changes for these closures have made it difficult to budget for these closures and to coordinate actions (76). Furthermore, the 23rd, 24th, and 26th Air Division (ADTAC) budget officers all stated that lack of detailed planning has caused numerous problems in closing radar sites within their area of responsibility. Specifically, they mentioned problems concerning the timely disposition of supplies and the settling of final bills concerning contractual obligations (27; 46; 82). At 21st Air Division (ADTAC) the Director of Logistics (LG) stated

that his Air Division has been very successful in resolving problems occurring during closures by holding biweekly coordination meetings with other staff members and by issuing supplemental instructions to the PADs (67).

Key personnel at Headquarters, United States Air Force (HQ USAF) and within ADTAC were in general agreement that planning is essential if these installations are going to be closed in an effective and efficient manner (25; 27; 28; 46; 58; 67; 76; 78; 82; 83). Lieutenant Colonel Thomas, Directorate of Programs, HQ USAF, and Major Lee, Programmer for Strategic Defense Forces, HQ USAF, both believed that poor planning significantly contributed to the generation of many of the problems which have occurred during an installation closure (58; 82). Lt Col Thomas suggested that part of the problem in closing ADCOM radar sites has been the recent rush to publish PADs for the sites closing in 1979 and 1980 (83). Maj Lee was of the opinion that many of the planning problems are a reflection of poorly written PADs or regulations which are too vague (58).

#### Scope

There are many variables which impact on an effective closure. As stated in the introduction portion of this study, planning is an essential ingredient for closing

these sites effectively. However, other aspects are also important.

Lt Col Thomas, of the Air Staff, stated that continual management attention to the closures by the MAJCOM was a necessity and that the managerial abilities of the affected site commander were crucial, especially in handling the community relations problem (83). Another Air Staff member, Maj Lee, stated that besides planning, the political and socioeconomic considerations were important. In his opinion a good plan could overcome the shortcomings of a particular site commander (58). Maj Lee's viewpoint was almost identical to that of Lt Col Demijohn, a key planner for HQ ADTAC (28). Col Ravetti, the ADCOM Comptroller, stressed that any variable could be classified under planning and he reiterated that a closure plan should be based on a firm schedule because of its effect on morale and the budget (76).

Other factors which can have an important bearing on the closure process are the capabilities of subordinate supervisors and workers at the deactivating site, the geographic closeness of the site to its host base, and the time constraints imposed by higher headquarters for closing the site or the subordinate functions (25). All of these personnel were in general agreement though that planning is probably the most important variable to be considered in deactivating a site.



The reader should be aware that it is extremely difficult to analyze in isolation the importance of planning on the closure process. However, a priori, good planning can mitigate any adverse influence which these other non-planning variables may have on the closure process.

Several authors have discussed in detail the important characteristics or aspects that quality plans should possess, such as considerations of cost, timeliness, accuracy and completeness. Both Kalbaugh and Riggs referred to the cost and timeliness factors when they stated that "proposed plans should take into consideration resource allocations, timing of events. . . [56:107]." Henning and LeBreton said that "it is our thought that a qualified planner should always attempt to calculate the anticipated results of any proposed plan in dollar terms [50:29]." They also stressed that plans must consider the timely completion of required actions (50:31-36,295,296). Both the benefits of reducing organizational costs and the importance of having accurate plans were highlighted by Jack Duncan (32:286,293). Further, Hellriegel and Slocum commented on the necessity of accurate plans, especially as the "number of people and units impacted [49:24]" become greater. These and other writers such as Emery, Petit, and Filley are in agreement that the completeness of

planning is also an integral part of any quality plan (32:293; 38:108; 41:430,431; 49:24; 50:30,294; 56:106-109; 72:155).

As importantly, the factors which can affect the quality of planning are the experience of the planners, the time available for formulating the plan and the amount of resources available for the planning effort (32:287; 39:104,106; 49:244). Emory emphasized that "meaningful planning takes time and effort [39:106]" and that planning will cost the organization in money and manpower resources. Duncan stated that research has shown that "successful planning is related to . . . management's formal training and experience [32:287]." According to Hellriegel and Slocum the major categories of resources necessary to make a plan operational are "money; facilities and equipment; materials, supplies, and services; and personnel [49:244]." These management specialists place a good deal of emphasis on the importance of having complete plans. Thus, while assuming that all the factors referenced above must be present if a plan is to be categorized as "good," the emphasis of this thesis will be on the completeness of plans.

Many of these same authors have referred to plans as being complete if required tasks and priorities are identified (39:108); if relevant information is provided to those people who require it in accomplishing goals; if

a feedback mechanism is present (72:155,156); and if all objectives, constraints, alternatives, and performance criteria are identified (41:430,431). A synthesis of the information contained in the publications of these authors reveals that a complete plan should at least include the following:

1. Translation of broad goals into specific measurable objectives;
2. Specification of operational and related activities which will accomplish these objectives;
3. Establishment of proper sequencing of the activities;
4. Review of regulations, laws, statutes, and other constraints which must be followed;
5. Allocation of financial, manpower, and material resources within imposed constraints;
6. Establishment of feedback systems with the capability to sense undesirable changes or alternatives and control actions as desired; and
7. Provisions to inform those organizations which require it necessary information in a timely manner (32:293; 38:108; 41:430,431; 49:24; 50:30,294; 56:106-109; 72:155).

For the purpose of this thesis, the only deactivated Air Force units which were analyzed in detail came from a sample of CONUS long-range radar (LRR) sites

organized under ADTAC (81:3). There were several reasons for concentrating the study on these particular sites:

1. A radar site contains many of the same functions normally performed on a larger-size Air Force base. A typical CONUS geographically-separated radar site includes the following: command section, operations, communications, maintenance, civil engineering, supply, transportation, personnel, administration, budget, training, commissary, site exchange, dining hall, linen exchange, dormitories, family housing, Noncommissioned Officer (NCO) club, and recreation services (15:Sec. C). Antigo Air Force Station (AFS), Wisconsin, an ADCOM radar site, is typical of other geographically-separated radar installations with a total of 106 personnel authorized: three officers, 76 enlisted personnel and 27 civilians (15:Sec. S). Not included in this overall figure were two Army-Air Force Exchange Service employees who operated the site exchange, two auxiliary chaplains, and part-time help for the NCO Club, and commissary (15:Sec. S).

2. Starting with the Antigo AFS, Wisconsin, closure in 1977 and the 31 site closures under the JSS during 1979 and 1980, a large and current data file of deactivation policies, procedures, and decisions has been developed. Even though Antigo AFS was not closed as part of the JSS realignment, it was selected for analysis in this study because it closed in the relatively recent past;

its organization, function and manning were typical of those sites closing under JSS; and extensive historical data remains concerning this particular deactivation.

3. Time limitations prevented the detailed analysis of other MAJCOM experiences in deactivating small units. However, information was used from two Air Command and Staff College Research Studies (2:1,2; 53:1).

#### Purpose of the Research

The purpose of this thesis is to determine what relationship (if any) exists between the completeness of planning for the closure of a small installation and the subsequent effectiveness of the closure process. This basic statement of purpose suggests the following two research objectives along with associated research questions:

1. Research Objective One: Determine the completeness of planning for each PAD developed for a selected number of radar sites involved in the JSS closure process and for Antigo AFS.

a. Research Question One: What agencies/functional areas must be considered and involved in the development of a complete PAD?

b. Research Question Two: What specific regulations and procedures must be considered and included in a complete PAD?

c. Research Question Three: To what degree has the value of the planning variable changed over time?

2. Research Objective Two: Determine the effectiveness of the closure process for each of the radar sites analyzed in answering research objective one.

a. Research Question Four: What objectives constitute an effective closure?

b. Research Question Five: What is the degree of agreement between headquarters personnel and site commanders as to what constitutes an effective closure?

These two research objectives provide a foundation for investigating the following research proposition: The effectiveness of the process for closing a small AF unit is directly and significantly affected by (related to) the completeness of the planning accomplished for that closure.

#### Literature Review

The Air Force has not published in any one directive the general planning and technical guidance needed for deactivating a military installation (83). Instead, each Air Force functional unit (e.g., supply, civil engineering, and personnel) has published separate regulations and manuals detailing the instructions their own specialists should follow during a closure. For example, the USAF Supply Manual, Air Force Manual (AFM) 67-1, explains the procedures and documentation required for redistributing

supplies (53:70). Consequently, procedural guidance for developing an overall plan or addressing the common problems associated with the closure of an Air Force installation cannot be found by just referring to one regulation or manual.

When the decision is made to deactivate an Air Force unit, HQ USAF directs the MAJCOMs to publish PADs which specify the detailed closure instructions for the unit in question (4:1).

Therefore, the PADs published by ADCOM or TAC for ADTAC were the principal documents used in obtaining data for this thesis. As its name implies, the PADs are directive on all designated action agencies. ADCOM or ADTAC PADs are divided into two basic sections. The first part has the objectives, authority, general guidance, and responsibilities of ADCOM/ADTAC staff agencies including the naming of project officers for all key Command agencies (4:1-8). The second part has, on an ADC Form 203, System Control Plan, the starting and completion dates for each required action and the appropriate office of responsibility (4:Annexes A-J).

As part of the closure process of LRR sites under JSS, ADCOM published several Facility Closure Plans (FCPs). Due to time constraints and the heavy workload involved, the only FCPs developed were for the closures of Baudette AFS, MN; Blaine AFS, WA; Bucks Harbor AFS, ME; Empire AFS,

MI; Finland AFS, MN; Finley AFS, ND; Havre AFS, MT; Keno AFS, OR; Lockport AFS, NY; Mica Peak AFS, WA; Opheim AFS, MT; and Sault Ste. Marie AFS, MI (48).

The first section of an FCP has an overall plan for closing the installation's buildings, the number of caretaker force personnel who will maintain the site after deactivation, utility contract termination instructions, real property documentation requirements, and pending facility contracts (43:1,2; 44:1,2; 61:1,2). The second section is comprised of an ADC Form 338, Closure Schedule. On it are listed the individual facility building number and name (e.g., Bldg #15, Dining Hall), schedule closure date, schedule date to be pickled (e.g., the date in which utility services are terminated), a statement if a building will remain open, or if any further Air Force projects are required on a particular building (43:Atch.1; 44: Atch.1; 61:Atch1). The FCPs were normally published six months to a year prior to actual site deactivation to provide preliminary guidance to the site commander and his staff concerning civil engineering and budgetary actions which must be accomplished during the closure process.

Like the PAD documents, the instructions contained in an FCP can give an indication of the thoroughness of planning. Specifically, an FCP may tell if contract termination dates are realistic, if the sequence of closure



actions are in consonance with instructions contained in the PAD, and the accuracy of budget instructions.

A large part of the special studies accomplished on Air Force installation closures have been concerned with economic and environmental impact analysis which does not directly concern this study. Two research studies submitted to the faculty of the Air Command and Staff College at Maxwell AFB, Alabama, considered aspects of base closures other than environmental. The first study, "Planning and Management of Base Closures," dealt with mistakes made during the closure process "which result in wasted resources, general turmoil, and inconvenience to departing personnel [2:ii]." Basically, this was a lessons learned study on closing large Air Force installations in the Republic of Vietnam and Thailand. The second study, "A Report on Supply Procedures During Base Closure," concentrated on lessons learned associated with "the massive withdrawal of materiel from Southeast Asia as U.S. military forces were reduced [53:iii]." Both reports are concerned with the impact of good and bad management practices on the closure process. ADCOM also published a lessons learned letter addressing key problems which have occurred during LRR site closures (1:Atch.1). These two studies and the lessons learned letter were referred to as possible sources for determining PAD omissions.

The attempt of Air Force managers to plan an installation closure, large or small, could be hampered by this dispersal of planning guidance among various regulations, manuals, reports, and letters, and the lack of a consolidated directive which addresses the subject.

Furthermore, key personnel on the Air Staff, ADCOM/ADTAC Headquarters and the Air Divisions stressed that planning guidance is essential for accomplishing these closures in an effective and efficient manner (25; 27; 28; 46; 58; 67; 76; 78; 82; 83). Numerous authors specializing in management theory agree that of all the aspects which must be present in a quality plan, completeness must rank among the most important (32; 39; 41; 49; 50; 56; 72).

The documentation which was studied to determine the effectiveness of each closure came from the following sources:

1. ADC Forms 193, Program Progress/Revision Report, which indicate either the timely completion or slippage time for each PAD action item (4).
2. Air Force Audit Agency audit reports pertaining to site closures which indicate losses due to ineffective closures (79; 84).
3. Site manpower and budgetary documentation available at the appropriate Air Division Personnel and Budget offices. Manpower documents indicate the actual transfer

date of personnel while budgetary data show the additional cost to the government of either taking or not implementing a particular action.

#### Thesis Outline

The remaining chapters of this thesis will describe in detail the following:

1. Chapter II--the methodology to be used in answering the research objectives, questions, and proposition;
2. Chapter III--a proposed PAD for deactivating a small USAF installation and an enumeration of PAD omissions for selected ADCOM/ADTAC radar sites;
3. Chapter IV--an analysis of the objectives which should be included in an effective closure process along with a correlation analysis of the adequacy of planning and its effects on the objectives of the closure process; and
4. Chapter V--a discussion of conclusions, recommendations, and suggestions for further research.

## CHAPTER II

### METHODOLOGY

#### Introduction

This chapter presents the research design and methodology to be used in this study. For the two research objectives, procedures to establish operational definitions will be presented. These will be followed in each case by data gathering and measurement plans. Lastly, plans to analyze and test the validity of the research proposition will be presented.

#### Research Objective One

##### Operational Definition Development Plan

The procedure to establish an appropriate operational definition for the completeness of planning involves the answering of research questions one and two. This was accomplished by developing a comprehensive checklist of elements to be included (or considered for inclusion) in a PAD. Planners at HQ ADCOM/ADTAC who are associated with coordination of the final PAD were queried by telephone using the formal interview instrument provided in Appendix A. Only offices with symbols of three letters or less were interviewed to provide for a macro view of the planning aspect. The offices to be interviewed were obtained

from HQ ADTAC/XPP. This office is responsible for the overall monitoring and coordinating of the PADs (28).

Offices interviewed included:

1. LGS (Supply)
2. ACM (Management Analysis)
3. ACB (Budget)
4. DEH (Housing)
5. SP (Security Police)
6. DC (Communications)
7. DAA (Administration)
8. DEP (Civil Engineering)
9. XPP (Plans & Programs)
10. DOX (Operations)
11. DP (Personnel)
12. LGK (Electronics)

Personnel in command of the radar sites (see next page) at the time of closure were also queried using the instrument in Appendix A. In addition, planners at other headquarters offices comparable to those listed above were asked to respond to these questions. The intent was to eliminate any biased experiences by simply querying the original planners of the PADs at ADCOM/ADTAC as well as provide for a broader view of the completeness of the PADs. Each interviewee was asked to provide specific inputs pertaining to his/her appropriate area of responsibility along with the applicable regulation or manual reference.

Data Gathering and  
Measurement Plan

Data gathering techniques and procedures used to measure the inputs of a complete plan were:

1. Based on the operational definition of the inputs to a complete plan, a determination was made as to the number of frequency of exclusions of these planning inputs in each of the PADs (cases) being studied. These omissions were individually tabulated for each case and recorded.

2. The specific PADs which were analyzed were developed for the following radar sites:

<u>Radar Site</u>	<u>Closure Date</u>
a. Antigo AFS, Wisconsin (5)	1 April 1977
b. Blaine AFS, Washington (8)	1 January 1979
c. St. Albans AFS, Vermont (10)	1 April 1979
d. Lockport AFS, New York (9)	1 June 1979
e. Baudette AFS, Minnesota (6)	1 July 1979
f. Havre AFS, Montana (11)	1 July 1979
g. Opheim AFS, Montana (12)	1 July 1979
h. Fortuna AFS, North Dakota (13)	1 July 1979
i. Minot AFS, North Dakota (14)	1 July 1979
g. Sault Sainte Marie AFS, Michigan (7)	1 October 1979
h. Watertown AFS, New York (4)	1 November 1979

The PADs for these sites are located within the Air Force Audit Agency, Peterson AFB, Colorado 80914.

These radar sites constitute the complete list of sites which have been completely closed down under the JSS concept as of 1 January 1980. Data for this study is only available through analysis of their PADs and subsequent closure processes.

3. Research question three was analyzed by developing a trend analysis of the completeness of planning variable over the time period of the PADs in the study. The individual case frequencies of the omissions were ordered according to the published date (month and year) of each PAD to determine if the completeness of planning changed through time. To assist in this determination, a histogram was developed using the data as described above (69:29-32). This information was collected at the interval level since the data can be classified (there is or is not an omission in the case), ordered (the number of omissions per case), and a distance can be determined between each case (e.g., ten omissions are twice as much as five omissions)(39:112-117).

#### Research Objective Two

##### Operational Definition Development Plan

The procedures used to establish an appropriate operational definition for an effective small unit closure were:

1. Pose research question four (What objectives constitute an effective closure?) to those key personnel (listed below) involved in the deactivation of Air Defense radar squadrons under JSS. This was accomplished by conducting a sample survey by telephone of personnel at all management levels who have been directly involved in planning and closing these radar sites. The design of this sample is classified as nonprobability and purposive; specifically an expert choice (or judgment) sample. The sample was not random or unrestricted since our object was to only question those people "in the best position to provide us with information [39:137,166]." Specific personnel who were queried were the Chief, Basing Branch, Directorate of Programs, HQ USAF; the Programmer for Strategic Defense Forces, Directorate of Programs, HQ USAF; Chief, Plans and Programs Division, HQ ADTAC; Director of Supply, HQ ADTAC; Director of Engineering and Construction, HQ ADTAC; Controller, HQ ADCOM; the Directors of Logistics and Budget Officers at the six ADCOM/ADTAC Air Divisions; and those radar site commanders who have been charged with the direct responsibility for deactivating their unit.

This list was developed in collaboration with Lt Col Thomas, Chief, Basing Branch, Directorate of Programs, HQ USAF (83), the Air Staff agency which monitors the closure of USAF units.



2. This survey was conducted by means of a telephone interview with each of the respondents listed above. The specific survey questions and information to be gathered are contained in Appendix C.

3. As a means of introducing these questions, a letter was sent (reference Appendix B) to each respondent approximately two to three weeks prior to being contacted by telephone. Sending a letter in advance enabled each respondent to give careful thought to each of the questions (39:282,283).

4. Each response received was categorized into broad groupings. Tentative groupings were the importance of securing government property, the timely redistribution of supplies, and the timely reassignment of personnel.

5. Tabulation of a frequency count of the responses assigned to each category was made. It was assumed that the aptness of each category as it relates to closure effectiveness depended on its frequency count, with the highest count deemed the most pertinent and on down to the category containing the least amount of responses. This compiling and tabulation of each response enabled the researchers to answer research question five (What is the degree of agreement between HQ personnel and site commanders as to what constitutes an effective closure?)

### Data Gathering and Measurement Plan

1. Criteria used as measurements of the objectives of an effective closure were obtained by asking question 3b of Appendix C to the participants of these interviews.

2. Besides obtaining the opinion of the persons being surveyed, measurement ideas were obtained by reviewing budgetary and manpower documents pertaining to the deactivated radar sites. Also, information was collected from pertinent audit reports originating from the Air Force Audit Agency, Norton AFB, California, and HQ ADTAC, Peterson AFB, Colorado. Budgetary information was obtained from either the budget offices at ADTAC Headquarters, Peterson AFB, Colorado, or from an appropriate Air Division (20, 21st, 23rd, 24th, 25th, and 26th).

3. Responses mentioned above and other ideas were screened for those closure effectiveness measurements which provide a ratio measure of the degree to which the goals/objectives established for the closure process have been accomplished.

4. Development of a trend analysis of this data completed this portion of the research. Values for each measurable category of an effective closure were obtained from each of the closure processes of the radar sites listed on page 22. These values were ordered according

to the date (month and year) of the radar site closure to determine if the effectiveness of these closures has changed through time. To assist in this determination, a histogram was created for each closure effectiveness category (69:29-32).

#### Research Proposition

The procedures followed in answering the research proposition involved the use of the data and measurements obtained while researching the two research objectives. The objective was to explore relationships or correlations, if any, existing between the respective measurements of planning completeness and closure effectiveness. This was accomplished in the following manner:

1. The categories identified as objectives of an effective closure were analyzed to ascertain which, if any, could in fact be measured. Objective four, closure of the site without delays pertaining to the PAD (see list of objectives, Chapter IV), was the sole objective for which a suitable measurement was found. The measurement data relating to this objective for each radar site listed on page 22 was gathered at the interval level.

2. Based on the measurement of an effective closure for objective four, an attempt was made to calculate the impact of a decrease in effectiveness for each of the deactivated radar sites. This figure was labeled as the

dependent variable Y, Appendix G. This effectiveness calculation was plotted against the total number of omissions in each PAD for each particular case, reference Chapter III (This was labeled as the independent variable X, Appendix G.)

3. Because the data for both variables was collected at least at the interval level it was possible to use the Spearman Rank Correlation Coefficient ( $r_s$ ) to analyze possible correlations existing between the two variables (45:275; 80:210-213). For the Spearman correlation test, the null hypothesis ( $H_0$ ) (80:7) is "that the two variables under study are not associated in the population and that the observed value of  $r_s$  differs from zero only by chance [80:210]." The alternative hypothesis ( $H_1$ ) (80:7) is that the two variables are related.

4. Because the size of N (sample size) was eleven, the following procedure was used:

If N is equal to or greater than ten, the significance of the correlation is determined by computing the Student's t-statistic as follows:

$$t = r_s \sqrt{\frac{N-2}{1-r_s^2}} \quad (80:213)$$

The  $r_s$  value is calculated by the Statistical Package for the Social Sciences (SPSS) subprogram NONPAR CORR (18:288). The resulting t-statistic is compared to the critical

random variables of "t" as listed in Appendix H to determine the significance. If the computed t-value is greater than the critical t-value, the null hypothesis may be rejected (80-213).

## CHAPTER III

### COMPLETENESS OF PLANNING FOR SMALL SITE DEACTIVATIONS

#### Introduction

This chapter contains a discussion of the findings relative to research objective one. The purpose of this objective was to determine the completeness of planning for each PAD developed for a selected number of radar sites involved in the JSS closure process and for Antigo AFS. This was accomplished by investigating the following research questions pertaining to research objective one:

1. What agencies/functional areas must be considered and involved in the development of a complete PAD?
2. What specific regulations and procedures must be considered and included in a complete PAD?
3. To what degree has the value of the planning variable changed over time?

Towards this end, the chapter contains a suggested PAD overview section, a detailed PAD checklist, and a frequency count of PAD omissions for the deactivated sites listed on page 22. The results of the research follow.

#### Research Question One Results

In answering research question one (paragraph 1 above), a determination had to be made as to the adequacy

of the current PADs in covering the full spectrum of functional areas located within a radar squadron. The organizational chart depicted in Figure 1 was used to ascertain the functional areas of a typical ADCOM/ADTAC radar squadron (70:1-4). A check of the areas covered in the PADs (Appendix D) as related, for example to this organizational chart revealed the following (4):

<u>Section</u>	<u>Covered in PAD by</u>
Commander	XPM
Administration	DA
Personnel Management	DP
Morale, Welfare, Recreation	OP
Operations	DO
Intelligence	INX
Logistics Support	LGX
Budget	Not Covered
Transportation	LGT
Unit Supply	LGS
Food Services	DE
Radar Maintenance	LGK
Communications	KR
Medical/Dental	SG
Civil Engineering	DE

In all cases, every squadron function area was covered in the PADs except for the budget area. Subsequent investigation through the telephone interviews revealed that there

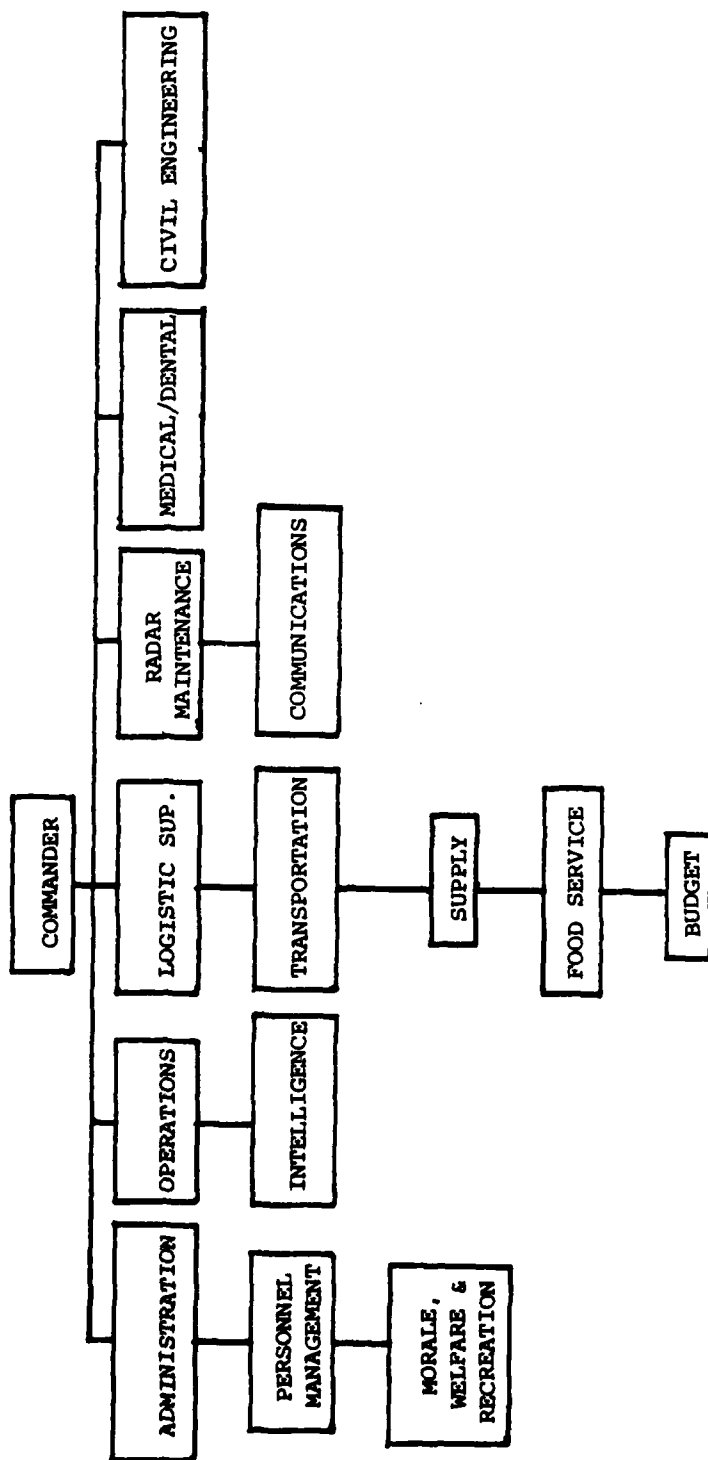


Fig. 1. Radar Site Organizational Chart



does exist subjects of concern in this area which should be addressed in the PADs (see PAD Closure Actions Section-- Budget, page 47 of this thesis) (76; 82). It was therefore determined that with the addition of the Budget area the full spectrum of squadron functional areas would be covered.

The telephone interviews also revealed that the inclusion of intermediate headquarters agencies (Air Divisions in ADTAC's case) and the site commanders greatly enhanced the planning exercise and PAD development in the areas of event sequencing and feedback systems (76; 82).

#### Research Question Two Results

The information necessary to answer research question two (paragraph b) was gathered in part by interviewing key personnel involved in the closure process for the eleven sites listed on page 22. These personnel were contacted in an effort to ascertain what the contents of a closure PAD should be. A list of the personnel contacted follows:

<u>Name</u>	<u>Position</u>
Lt Col Demijohn (28)	HQ ADTAC/XPP
Capt Davis (26)	HA ADTAC/LGX
Lt Hansen (47)	HQ ADTAC/ACM
Lt Wedertz (88)	HQ ADTAC/DO
CMSgt Carnes (22)	HQ ADTAC/DP

<u>Name</u>	<u>Position</u>
CMSgt Pruitt (75)	HQ ADTAC/DE
SMSgt Rousselle (77)	HQ ADTAC/LGK
SMSgt Brooks (20)	HQ ADTAC/DA
MSgt Andrus (17)	HQ ADTAC/LGS
MSgt Leal (57)	HQ ADTAC/SP
MSgt Brownfield (21)	HQ ADTAC/DPC
Mr. Edmonds (33)	HQ ADCOM/KR
Maj Milkevitch (66)	21AD/SG <sup>3</sup>
Mr. DeWall (30)	HQ Air Force Logistics Command (AFLC)/LGT
Mr. Martin (64)	HQ AFLC/DE
Lt Col Edwards (34)	Lockport AFS Commander
Lt Col Meyer (65)	Charleston AFS Commander
Lt Col Ziebold (91)	Havre AFS Commander
Maj Black (19)	Fort Meade AFS Commander
Maj Cleckler (23)	Opheim AFS Commander
Maj Dmochowski (31)	Blaine AFS Commander
Maj Ellis (37)	Finley AFS Commander
Maj Hughes (55)	Empire AFS Commander
Maj McDonough (59)	Fortuna AFS Commander
Maj Nakamoto (68)	Sault Ste. Marie AFS Commander
Maj Zelenski (89)	Baudette AFS Commander
Capt Trithart (85)	Minot AFS Commander

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<sup>3</sup>An ADTAC Air Division medical officer was interviewed because of the phase-out of the HQ ADCOM/ADTAC medical office.

Also used in the process of putting together a complete PAD were applicable Air Force Audit Reports and ADCOM "Lessons Learned" letters (1; 24; 29; 35; 40; 60; 62; 79; 84; 90).

Even though the following list of suggested items to be included in a closure PAD are based on ADCOM/ADTAC's experience in deactivating small geographically separated long-range radar sites, the individual action items may, in many cases, be pertinent to any small-size sites which will be deactivated.<sup>4</sup> However, it must be emphasized that most small installations vary in mission, organization, remoteness and manpower strength. These action items should therefore be used as a management guide and a checklist of items to be considered by both planners charged with developing closure PADs as well as the users having the actual responsibility for implementing closure actions.

ADCOM Regulation 27-1, The Aerospace Defense Command Program System, is used as the basis for PAD development at HQ ADCOM. Under this regulation, each of the key Command functional areas is represented on a standing committee for PAD development, and for the resolution of

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<sup>4</sup>Most of the closure action items are from PAD 79-14, Inactivation 655 RADS, Watertown AFS NY, July 1979. Lt Col Demijohn stated that this was one of the more recent PADs published and it reflects more accurately the current conditions existing at those geographically separated radar sites being deactivated (28).

associated problems. The regulation does not provide for a specific PAD development format. Instead, past experience has been the principal factor used for developing the PAD action items (28). A sample PAD checklist is provided in Appendix D.

The first section of this chapter will present suggested guidance and directions which should be addressed in the beginning or overview section of the closure PAD. Following this will be detailed checklists subdivided into closure actions which must be accomplished by each office of primary responsibility (OPR) such as supply, civil engineering and maintenance. Unless otherwise stated, all OPRs will be those located at the site being closed. Each action item is listed in the order in which the action should be initiated. For example, item one, under unit supply, would normally be started before item two. Those action items which can be started simultaneously are indicated by the same first digit, but a different alpha designator (e.g., 1A, 1B and 1C). In most cases, earlier listed items should be completed prior to latter listed items.<sup>5</sup> The amount of time to complete various items will vary with the individual situation such as the total time allotted to the site for deactivation.

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<sup>5</sup>Also, some items will be continual throughout the closure process such as increasing security measures to prevent theft.

### PAD Overview Section

In the front of all ADCOM PADs is an overview section containing general information pertinent to all parties involved in the closure process. Information contained in the overview section of the proposed PAD should include the following (4:1-7):

1. The dates of operations cessation and site inactivation. Also, the date for the activation of the caretaker force along with the unit designation of the caretaker force.

2. Special instructions for large size equipment removal (e.g., diesel engines) and reference to a schedule (Facility Closure Plan) for preparing buildings for long-term storage (pickling).

3. Operations security consideration.

4. Reference to applicable environment impact studies.

5. Date for termination of normal staff reports.

6. Notice that Headquarters Air Force Commissary Service (HQ AFCOMS) will prepare a detailed PAD for closing the commissary.

7. Authority to close the dining hall at an earlier date if personnel having meal cards are transferred out.

8. The responsible agency for second destination transportation funding (transportation funding from the

host support base to the final destination for all materiel being redistributed).

9. A reminder of the need for increased safety practices during the inactivation period.

10. For each MAJCOM office which is an OPR for the PAD, the name of the Project Officer(s) and his/her telephone extension. Also, after the name of each OPR should be a general discussion of some of their primary duties or items which they should consider. Two examples are:

a. The Deputy Chief of Staff (DCS)/Logistics Personnel will "resolve logistics problems which are beyond the capability of the unit to resolve [7:3]."

b. The DCS/Personnel Office will "provide personnel guidance and criteria for selection and assignment, separation, or retirement of personnel [7:4]."

11. Reporting instructions. Specifically, ADCOM/ADTAC units are tasked to report the status of action items for which they are responsible to HQ ADCOM DCS/Plans and Programs using ADCOM Form 193 on the first and sixteenth day of each month in accordance with (IAW) ADCOM 27-1 (see Appendix E for sample ADCOM Form 193) (4:7).

The following suggestions, not presently included in ADCOM PADs, were obtained through personal interviews conducted utilizing the questionnaire formats contained

in Appendices A and C.<sup>6</sup> The interviewees thought that these items should be listed in the overview section of a deactivation PAD. It is emphasized though that these suggestions are simply being reported and are not necessarily endorsed by the authors of this thesis. It will be up to the reader to judge the validity of the comments listed below.

1. The deactivating unit commander, himself, along with the appropriate intermediate headquarters should be fully involved in the development of the PAD. Also, host base personnel should be encouraged to visit the site. This would enhance coordination and, most importantly, bring to management's attention at an early date any unique problems which must be addressed.

2. There should be a general (very broad) paragraph, section, or chart highlighting those key events that will occur along with the associated interdependencies. This would provide management with a clearer picture of the overall closure process and possibly bring to light any serious shortcomings in planning. As explained above, each functional area develops their own portion of the PAD and it is difficult to tell if there is any interrelatedness, for example, between a civil engineering action item and a supply item. Further, the complaint arose that within a single functional area of the PAD (e.g., the Civil

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<sup>6</sup>References as to contributors have been excluded because of prior agreement.

Engineering Section which in turn is subdivided into housing, civil engineering, dining hall, etc.) action items were commingled thereby making it difficult to follow the complete closure process. To overcome these problems, one of the site commanders developed his own Program Evaluation and Review Technique (PERT) chart while several others developed charts showing such items as personnel data (e.g., general and specific skills, assignment date, effectiveness report status, decoration inputs, and scheduled departure dates) or PAD action completion status. For the reader's convenience, a sample process chart for a small unit deactivation is outlined in Appendix F. The reader is cautioned again that this flowchart is meant to be only a general model and that the specific interactions and dependencies for a particular site would probably vary and should be described in more detail by drawing a PERT network.

3. All affected agencies should be tasked to develop their own internal plans for supporting the closure PAD. The PAD cannot address all of the problems or in the detail needed. Advance planning is necessary to minimize the possibility of not completing all the milestones.

4. A short checklist could be helpful for reminding the site commander of important items peculiar to his/her closure. For example,



a. How many buildings will be open and telephones available within thirty days of closure?

b. What is the current status of the operations and maintenance budget?

5. Explicit instructions should be provided for distributing closure status reports to all affected parties, both up and down the chain of command and laterally to outside agencies, as applicable. For example, the PADs stated that the action item OPRs would forward status reports from the deactivating unit to MAJCOM; however, Command OPRs were under no obligation to tell the closing unit that a MAJCOM action item was completed (5:8; 7:7). This greatly weakened the effort to coordinate the phase-down effort and in some cases the site commanders were operating under the erroneous belief that the Command OPR had completed an action item when in fact they had not.

6. The site commander should be tasked to provide concurrently with his/her semiannual phase-down status report (submission of the ADCOM Form 193) a "lessons learned" letter. This would enable problems and suggestions to be identified at the earliest possible time and to allow for recording before they become forgotten. In turn, the Command would have an early opportunity to disseminate these to other units, as required.

7. The Commander should give site personnel a special briefing on the provisions of AFR 67-10,

Responsibility for Management of Public Property in Possession of the Air Force. During this phase-down period, there could be an increased tendency of some site personnel to misappropriate or misuse government property. Thus, a special warning to all personnel at an early date could prevent problems later on.

8. The unit commander should be encouraged to work with Personnel in effecting the early transfer of single airmen. This may then enable the early closing of barracks and the dining hall along with a lessening of potential discipline problems. Concerning the early closure of the site's dining hall, an Air Force Audit Agency Report in its investigation of ADCOM's management of radar site closings stated

. . . that significant cost savings may be realized if these dining halls could be closed at these earlier dates. However, the feasibility of implementing these earlier dining hall closing dates will vary from site to site . . . and depend on the . . . remoteness of the site, the makeup of the work force, the impact on morale, and the impact on other closure aspects . . . [84:1].

9. Guidance should be provided on how the buildings and the property which will be remaining at the site will be protected from deterioration (e.g., what regulations should be followed). How should other structures such as fuel tanks be protected? As importantly, what are the general maintenance responsibilities expected from the caretaker force; e.g., do they do extensive preventive

maintenance or just cut the grass and replace broken windows, etc?

10. Specific information should be presented as to how, when, and who will be responsible for terminating contracts. Also, instructions for terminating government housing leases along with any available guidance for the disposition of base housing should be provided.

11. A section should be provided on how the overall disposition of supplies and equipment will be handled by answering such questions as when and who will be determining disposition. This should be accomplished by category of supply assets (e.g., bench stock, accountable equipment, etc.) Other questions that should be addressed are the site's responsibilities for dismantling mission equipment; and who will provide packing and crating, and transportation support.<sup>7</sup> In many cases, it was claimed that disposition instructions were late, vague, or constantly changing, causing confusion at site level. A 1979 Air Force Audit Agency Report confirmed that "redistribution orders . . . for assets . . . were not being sent to the radar sites on a timely basis [29:10]."

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<sup>7</sup>Possibly an Air Force Logistics Command Rapid Area Distribution Support team should be requested to do the packing and crating IAW AFM 67-1, Volume I, Chapter I. Also, the PAD should state where materiel will be stored and if the site closure will result in a significant reduction of logistics airlift requirements (30).

### Detailed PAD Checklists by Functional Area

Tables 1 through 13 contain a total of 185 detailed action items which should be considered as the baseline figure as to how many entries should be included in an ADCOM radar site closure PAD.

### Research Question Three Results

The PADs for the deactivated radar site listed on page 22 were obtained from the Air Force Audit Agency, Peterson AFB, Colorado 80914. Each of these PADs was compared to the proposed PAD Closure Actions Checklist which is presented in this chapter. Any action item in the proposed checklist which did not appear in the PAD of the deactivated radar site was recorded as an omission.<sup>8</sup> The purpose of doing this was twofold. First, the number of omissions at each site is an indication of the completeness of planning which went into each of the PADs. Second, an attempt was made to determine if the quality (completeness) of closure planning has improved over time since the Antigo AFS PAD was published in March 1977. No attempt is made in this thesis to distinguish between the relative importance or adverse impact of each omission. For example, twenty omissions for Baudette AFS could represent a

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<sup>8</sup>Omissions pertaining to the introduction/overview portion of the PAD are not counted in these totals. In virtually every instance, the additional suggestions presented earlier for inclusion in the opening paragraphs of the PADs are missing from all eleven PADs studied.

TABLE 1  
PLANNING

Sequence Number	Action Item*	OPR	Reference
1	Appoint a PAD project officer, assistant and monitor for each section of the PAD (7:7; 28; 90:2).	Commander (CC)	-
2	Forward name and extension number of PAD project officer to Command PAD OPR.	CC	-
3	Establish PAD working groups with a regular meeting schedule at the deactivating unit and intermediate headquarters (60:1).	Intermediate Headquarters Commander (CC) and Unit CC	-
4	Communicate unique requirements to Command PAD OPR (20).	CC	-
5	Establish a plan to accomplish necessary training of caretaker force (24:Atch.2)	CC	-

\*Unless otherwise indicated, closure actions are from PAD 79-14, Inactivation 655 RADS, Watertown AFS, NY, July 1979. These items are valid for small radar site closings according to HQ ADTAC/XPP (28).

TABLE 2

## MANPOWER AND ORGANIZATION

Sequence Number	Action Item*	OPR	Reference
1	Submit RCS:HAF-PRP (M) 7113 Report to obtain HQ USAF approval to inactivate the closing unit.	Command Manpower and Organization Office (XPM)	Air Force Regulation (AFR) 26-2
2	Publish G-Series orders to inactivate the unit by a certain date and to activate any residual caretaker unit.	XPM	AFR 10-4
3	Submit Force Status and Identity Report following effective date of unit actions.		Joint Chiefs of Staff Publication 6

\*Closure actions are from PAD 94-14, Inactivation 655 RADS, Watertown, NY, July 1979. These items are valid for small radar site closings according to HQ ADTAC/DPQ (21)

TABLE 3

## BUDGET

Sequence Number	Action Item	OPR	Reference
1	Develop cost analysis systems before closure date (82).	Host Base Management Analysis Section (ACM)	-
2A	Determine whether the Command, host base or deactivating unit will be paying for packing, crating, and transportation charges (37).	Command Budget Office (ACB)	-
2B	Estimate temporary duty and vehicle rental funds for caretaker force (24:A1-2).	ACB	-
3	Estimate budget targets for closure (47).	Command ACB	-
4	If a government house is to remain open for use by the caretaker force, transfer this building from the military family housing ledger to the operations and maintenance ledger with the host base Budget Office (54).	Host Base ACB	-

TABLE 4

## OPERATIONS AND INTELLIGENCE

Sequence Number	Action Item*	OPR	Reference
1A	Discontinue distribution of classified and unclassified materiel to the deactivated unit.	Intermediate and Command HQ Intelligence Officers	-
1B	Return classified materiel if directed by HQ agencies.	Operations (DO)	-
1C	Destroy all classified and unclassified publications and documents.	DO	AFR 205-1
2A	Remote software adaptations from operations and support program.	Intermediate HQ/DO	-
2B	Update documentation and pertinent technical manuals.	Intermediate HQ/DO	-
2C	Classified Instructional Systems Development cassette/slide programs will either be destroyed or returned to Headquarters Aerospace Audiovisual Service (HQ AAVS). If programs are destroyed, an AF Form 310, Document Record and Receipt, or letter signed	DO	-

\*Closure actions are from PAD 79-14, Inactivation 655 RADS. Watertown AFS, NY, July 1979. These items are valid for small radar site closings according to HA ADTAC/DO (88).



TABLE 4--Continued

Sequence Number	Action Item	OPR	Reference
2C (cont'd)	by the destruction official and one witness will be forwarded to HQ AAVS/LGHLD, Norton AFB, CA 92409. The certificate of destruction must state what was destroyed; e.g., number of slides, script, and audio cassette tape.		
3	Insure coordination is effected with the next higher headquarters regarding turn in/redistribution of disaster preparedness specialized equipment.	DO	AFM 67-1

TABLE 5

## PERSONNEL

Sequence Number	Action Item*	OPR	Reference
<u>General Personnel</u>			
1A	Complete assignment actions and release personnel for reassignment consistent with the date of availability established by the unit commander.	Host Base and Site Military Personnel Offices; Unit CC	APR 36-20
1B	Prepare reduction in force plan; notify Civilian Personnel Office and employees.	CC/Personnel Office (DP)	Public Law
1C	Notify contract chaplains of their termination date (55).	Host Base DP and Unit CC/DP	Public Law
2	Review outstanding obligations to recognize and record Morale, Welfare and Recreation (MWR) liabilities, especially those concerning personnel severance pay, bonuses, retroactive increases, and pay in lieu of notice. Coordinate with support base Civilian Personnel Office to insure all regular	Unit Welfare Fund Custodian (UWFC)	AFMPC/ DPMS 021920Z Message June 1976

\* Unless otherwise indicated, closure actions are from PAD 79-14, Inactivation 655 RADS, Watertown AFS, NY, July 1979. These items are valid for small radar site closings according to HQ ADTAC/DP (22).

TABLE 5--Continued

Sequence Number	Action Item	OPR	Reference
2 (cont'd)	full and part-time employees receive severance pay if they have been with the unit fund for longer than one year.		
<u>Testing Section</u>			
1	Close testing section after USAF approval and instructions for disposal have been received from Defense Activity for Non-traditional Education Support (DANTES).	CC	-
2	Initiate a request to Command HQ Personnel to disestablish DANTES testing section. Include a complete inventory of testing materials on hand signed by the current DANTES Test Control Officer (TCO).	CC	-
3	Revoke orders appointing DANTES TCO and alternate TCO and send copies of revocation to Command HQ and DANTES.	CC	-
<u>Library</u>			
1A	Contact support base for instructions concerning turn-in of all library materials.	Special Services (SS)	-

TABLE 5--Continued

Sequence Number	Action Item	OPR	Reference
1B	Forward necessary instructions to support base library.	Command SS	-
1C	Change shipping address for USAF centrally procured materials.	Command SS	-
1D	Redirect Armed Forces Photograph Record Kit.	Command SS	-
2	Inventory, pack, and ship book collection and complete paperwork for support base instructions.	SS	
3	Retire library administrative files.	SS	AFM 12-50
<u>Morale, Welfare and Recreation (MWR) Activities</u>			
1	Insure assets are protected and that dissipation does not occur. Do not increase entertainment or free/reduced periods for the bar or dining room.	CC and UWFC	-
2	Provide monthly property listings (PCN:N378013) and property change list to Command HQ Special Services and Consolidated Open Mess (COM) Custodian (UWFC when applicable).	Host Base SS and Unit CC	-

TABLE 5--Continued

Sequence Number	Action Item	OPR	Reference
3A	Establish a schedule to ensure orderly phase-down of special services activities prior to scheduled closeout.	CC	-
3B	Send a copy of the correspondence to Command SS notifying the COM and UWFC when their activities will cease.	CC	-
3C	Notify the host base Nonappropriated Financial Fund Financial Management Board (NAFFMB) and local bank when the UWF activities and open messes will close.	CC/SS/UWFC	-
3D	Submit a letter to Contracting Office and Civil Engineering to terminate UWF contracts/purchase orders, if applicable. Reduce purchase of saleable merchandise and supplies to a 30-day supply. Notify vendors of dissolution; cancel outstanding orders; notify Command HQ SS of all enroute shipments which cannot be cancelled. Request rebates of premiums and advance payments, deposits.	SS/UWFC	-
3E	Notify the Air Force Welfare Board to transfer funds in Centralized Investment program to checking account. Where	SS	-

TABLE 5--Continued

Sequence Number	Action Item	OPR	Reference
3E (cont'd)	applicable, transfer investments to checking account or transfer ownership of government securities to Command Membership Association Fund.		
3F	Insure the Open Mess Fund and Unit Welfare Fund (UWF) custodians do not depart prior to all actions listed on this phase-down are completed.	CC	-
3G	Inventory nonexpendable and expendable property items to determine if serviceable. Unserviceable items will be disposed of in accordance with (IAW) Command instructions. Report results to Command Special Services.	SS/UWFC	-
3H	Submit request to intermediate headquarters to retain specific MWR property items, if appropriate.	CC/SS	-
3I	Arrange for write-off and turn-in of unserviceable property to Defense Property Disposal Office (DPDO).	SS/UWFC	-
3J	Arrange to return resale items to commissary/base exchange and vendors, if applicable.	SS/UWFC	-

TABLE 5--Continued

Sequence Number	Action Item	OPR	Reference
3K	Send all excess plastic AF membership cards and expiration stickers to Command Special Services.	SS	-
3L	End credit sales and check cashing at the COM and UWF.	SS/UWFC	-
3M	Purify all accounts receivable; begin collection; request military pay orders; make write-offs for uncollectible accounts.	SS/UWFC	AFM 177-108
3N	Limit COM and UWF expenditures to those required to liquidate liabilities or pay essential operation costs and prevent losses in net earnings prior to dissolution.	SS/UWFC	-
3O	Request terminal audit of the COM and UWF.	SS/UWFC	-
4	Recommend disposition of Open Mess and UWF items required by other sites or bases and provide one copy of the inventory and recommended disposition to Command Special Services. Gaining organization must fund transportation costs.	Intermediate HQ	-

TABLE 5--Continued

Sequence Number	Action Item	OPR	Reference
5	Dispose of all Nonappropriated Fund property IAW Command instructions. Prepare AF Form 2534 for all property items being transferred, sold, or disposed of, reflecting current net book value for each item. Forward signed forms to support NAFFMB and Command Special Services.	SS/UWFC	-
6	Request contractors and vendors submit final bills for payment. Liquidate obligations immediately upon receipt of final bills.	SS/UWFC	-
7	Include the unit in the Unit Welfare Account maintained within Command Welfare Fund records. Issue instructions for operation under the Unit Welfare Fund Account.	Command SS	-
8A	Submit Special Morale and Welfare Expenditures Report (RCS:MPC-DPMS-Q, 7505) over the unit commander's signature to Command Special Services.	CC/SS	-
8B	Send to Command Special Services all COM cash in excess of current liabilities by check, and all UWF cash in excess of current liabilities by check made payable to the Command Welfare Fund.	Host Base SS and SS/UWFC	-



TABLE 5--Continued

Sequence Number	Action Item	OPR	Reference
8C	Complete final Open Mess and UWF financial statements and reports; and other actions required locally.	Host Base SS and SS/UWFC	-
8D	Immediately upon receipt of final COM and UWF financial statements, forward them together with all necessary reports to Command Special Services. Also send certificate for COM and unit welfare fund, signed by Council Chairperson/Custodian attesting to the financial condition at dissolution and stating that all outstanding obligations have been liquidated.	SS/UWFC	-
9A	Flags and related accessories are turned in to the supporting Base Supply Customer Support function.	CC	AFM 67-1
9B	Return original unit emblem painting and correspondence pertaining to its approval to HQ USAF/MPCASA, Randolph AFB, TX. Furnish an information copy of forwarding correspondence to the Command Personnel Office.	CC	AFM 12-50 and AFM 900-3
9C	Forward Air Force Outstanding Unit Award elements (citation, streamers, certificate,	CC	AFR 900-48

TABLE 5--Continued

Sequence Number	Action Item	OPR	Reference
9C (cont'd)	and special orders) to the Air Force Museum/DM, Wright-Patterson AFB, OH.	CC	AFR 900-48
9D	Forward reenlistment and retention, advertising and publicity materials, equipment, and excess publications to host base Consolidated Base Personnel Office/DPMQC.	CC	AFR 35-16
9E	Make final disposition on Family Services material, equipment and records.	CC	AFR 211-24
10	Dispose of all documentation.	SS/UWFC	AFM 12-50

TABLE 6  
LOGISTICS

Sequence Number	Action Item*	OPR	Reference
1A	Terminate host tenant and interservice support agreements effective on the official inactivation date.	CC/ Logistics Office	AFR 11-4
1B	Negotiate necessary host tenant or interservice support agreements for the caretaker force.	CC/ Logistics Office	AFR 11-4

59

\*These closure actions are from PAD 79-14, Inactivation 655 RADS, Watertown AFS, NY, July 1979. These items are valid for small radar site closings according to HQ/ADTAC/LGS (17).

TABLE 7

## SUPPLY

Sequence Number	Action Item*	OPR	Reference
1A	Appoint a supply representative to coordinate material movement and disposition. This representative will remain on site until all supply/equipment assets are evacuated.	CC	-
1B	Inform the Command Supply Office, in writing, of the name and telephone number of the supply representative.	CC	-
2A	Determine and provide the Command Equipment Management Office (CEMO; LGSE) a list of equipment requirements for the caretaker force and housing requirements (if applicable). This will also include Equipment Management Code-1 items (e.g., administrative office furniture). A complete inventory of the equipment account may be necessary (29:10-13).	Unit Supply (LGS)	AFM 67-1

\*Unless otherwise indicated, closure actions are from PAD 79-14, Inactivation 655 RADS, Watertown AFS, NY, July 1979. These items are valid for small radar site closings according to HQ ADTAC/LGS (17).

TABLE 7--Continued

Sequence Number	Action Item	OPR	Reference
2B	Coordinate with host base/LGS to determine procedures for tagging equipment items; e.g., serviceable/unserviceable (62).	LGS	AFM 67-1
2C	Coordinate with host base/LGS to insure all allowable credit is received on turn-ins (24:A1-2).	LGS	AFM 67-1
2D	Coordinate disposition of supplies and equipment with Defense Property Disposal Office (DPDO) before actual delivery (40:1).	LGS	AFM 67-1
2E	Identify the bench stock items being supplied from the host base that will no longer be required and take necessary action to delete.	LGS	AFM 67-1
2F	Inventory and report contractor-operated civil engineering supply store and contractor-operated parts store supplies/equipment on hand. Determine caretaker force requirements. Turn in excess to host base.	Civil Engineering/Transportation/LGS	AFM 67-1
2G	Take action to reduce/restrict stockage of base service store items to prevent accumulation of excess administrative supplies on site at time of closure.	LGS	AFM 67-1

TABLE 7--Continued

Sequence Number	Action Item	OPR	Reference
2H	Cancel outstanding equipment due-outs that are no longer required. Consider caretaker requirements (40:1).	LGS	AFM 67-1
2I	Turn in unserviceable equipment to host base or DPDO as directed by the Command/LGSE.	LGS	AFM 67-1
2J	Insure each individual possessing equipment issued by the host base properly terminates all equipment responsibilities prior to departure from station.	LGS	AFM 67-1
2K	Cancel outstanding supply due-outs at host base. Consider caretaker requirements.	LGS	AFM 67-1
2L	Delete supply publication requirements as applicable. Consider caretaker requirements.	LGS	AFM 12-50
2M	All hand tools will be accounted for and a copy of the consolidated tool kit/tool box listings annotated with correct status of individual tools. Mail listing to Command/LGSE.	LGS	AFM 67-1
2N	Insure all gasoline (MOGAS) is consumed 30 days prior to closure of the installation. Locally procure MOGAS required for	CC	-

TABLE 7--Continued

Sequence Number	Action Item	OPR	Reference
2N (cont'd)	last 30 days. Drawdown of War Readiness Materiel (WRM) and other required levels is authorized. Report excess to Command Fuels Office.		
20	Insure all power production/heating fuels are reduced to zero inventory or the necessary inventory applicable to caretaker status. Drawdown of WRM and other required levels is authorized. Report excess to Command Fuels Office.	CC	-
2P	Request disposition instructions on empty fuel tanks from Command Fuels Office.	LGS	-
2Q	Have all personnel clean out desks, cabinets and lockers at an early date and turn excess supplies into LGS (24:Atch.1).	CC	AFR 67-10 and AFM 67-1
3	Establish caretaker equipment account and transfer (FET) caretaker requirements to this account.	LGS	AFM 67-1
4A	Request deletion of FY station account number.	Command LGS	
4B	Prepare Reporting Organizational File (ROF) showing deactivation of Radar Squadron (RADs).	Command LGS	AFM 67-1

TABLE 7--Continued

Sequence Number	Action Item	OPR	Reference
5A	Identify and provide the inactivating unit a list of all test equipment and special tools required for transfer to holding account. Calibration requirements are waived during period equipment is in holding status.	Command LGSE	AFM 67-1
5B	Provide the inactivating unit final disposition instructions on all remaining equipment including Program, Communications-Electronics Support Program (PCSP) equipment (29:10-13.	Command LGSE	AFM 67-1



TABLE 8

## TRANSPORTATION

Sequence Number	Action Item*	OPR	Reference
1A	Identify what equipment, spares and supplies have to be moved. Coordinate with host base Transportation Management Officer (TMO), as required, to arrange packing, crating, and final shipping.	CC	AFR 75-1
1B	Identify sufficient personnel to be retained on board to assist host base TMO for final disposition of equipment.	CC	-
1C	Identify personnel to be transferred and coordinate with host base TMO to arrange personal property counseling and shipment.	CC	AFR 75-8
1D	Establish vehicle requirements for the caretaker force. Furnish or request disposition for all other vehicles as support functions terminate, and vehicle requirements are eliminated. Make 11-4	CC	-

\*Unless otherwise indicated, closure actions are from PAD 79-14, Inactivation 655 RADS, Watertown AFS, NY, July 1979. These items are valid for small radar site closings according to HQ ADTAC/LGS (17).

TABLE 8--Continued

Sequence Number	Action Item	OPR	Reference
1D (cont'd)	agreement for maintenance support of caretaker vehicles if required. Establish funding for General Services Administration (GSA) vehicles if required by caretaker force.		
2A	Prepare and forward Limited Technical Inspections to the host base supply office as USAF registered vehicles become excess to site requirements (9:A-6).	Host Base and Unit Transportation (LGT)	AFR 77-310
2B	Turn in GSA vehicles to regional GSA office as assets are no longer required (9:A-6)	Host Base and Unit LGT	-

TABLE 9

## CIVIL ENGINEERING

Sequence Number	Action Item*	OPR	Reference
<u>Civil Engineering Section</u>			
1	Prepare position descriptions for X-man caretaker force with grades assigned by Command Personnel Office (DPC). Forward position descriptions to servicing Civilian Personnel Office with requested date by which the positions must be filled.	Command Civil Engineering (DE)	-
2A	Cancel all operations and maintenance and military family housing projects except those specifically required in support of caretaker operations.	DE	AFR 85-9
2B	Determine the necessity to accomplish out-of-doors tasks prior to the advent of possible bad weather (24:Atch.2).	DE	-
2C	Determine the existence of any dangerous contaminants in any supplies/equipment to be moved off site. Coordinate with Command, host base, and local Environmental Protection Agency office as to proper disposition procedures (64; 68).	DE	AFR 87-4

\*Unless otherwise indicated, closure actions are from PAD 79-14, Inactivation 655 RADS, Watertown AFS, NY, July 1979. These items are valid for small radar site closings according to HQ ADTAC/DE (75).

TABLE 9--Continued

Sequence Number	Action Item	OPR	Reference
3	Submit Declaration of Excess to HQ USAF/LEERB.	DE	AFR 85-9
4A	Ascertain the date upon which payment of electricity demand charges terminate and advise utility service suppliers of reduced requirements at least 30 days prior to discontinuance of site operations.	DE	AFR 19-1
4B	Terminate all utility sale agreements and advise customers 30 days in advance of such actions.	DE	AFR 19-1
5	Insure that designated caretaker force build- ings will continue to have electric, heat, water and sewage utility services.	DE	AFR 19-1
6	Close and sterilize buildings as they become vacant and/or equipment is removed.	DE	AFR 87-4 and AFR 87-10
7	Prepare and submit SF 118s, Report of Excess Real Property, to District Corps of Engineers.	DE	AFR 87-4
8	Hold predisposal conference Command.	DE	-
<u>Housing Office</u>			
1A	Advise personnel to prepare advance application for housing, DD Form 1746.	DE/ Housing Office	AFR 90-1

TABLE 9--Continued

Sequence Number	Action Item	OPR	Reference
1B	Advise personnel of the Homeowners' Assistance Program.	DE/Housing Office	-
1C	Report changes in availability of quarters and messing as they occur to HQ USAF/DEHU with information copy to Command Housing Office.	DE	AFR 35-9
1D	Terminate leased housing as they become available.	DE/Housing Office	-
2A	Prepare final RCS:DD-I&L(A)1801, Inventory and Occupancy of Military Owned and Controlled Family Housing Units, and forward to the Command Housing Office.	DE/Housing Office	AFR 90-6
2B	Prepare final HAF-LEE(Q) 7509, Bachelor Housing Report, and forward to the Command Housing Office.	DE/Housing Office	-
<u>Dining Hall</u>			
1A	Notify vendors and supporting commissary officer of termination of dining hall operation; request cancellation of outstanding orders not required.	Food Service Office	-

TABLE 9--Continued

Sequence Number	Action Item	OPR	Reference
1B	Begin reducing on-hand subsistence supplies in the dining hall; coordinate disposition of excess subsistence or lack of funds to pay creditors with the Command Food Service Office.	Food Service Office	AFR 146-7
2A	Terminate Monetary Credit Allowance Management System and Subsistence Credit Allowance System (MCAMS/SCAMS) in the dining hall and place all airmen on Bachelor Allowance Subsistence.	Food Service Office	AFR 146-7
2B	Contact Publications Distribution Office for disposition instructions for forms (e.g., AF Forms 79 and 1339).	Food Service Office	AFR 7-2
3	Turn in food service change fund to support Accounting and Finance Office.	Food Service Office	AFM 177-108
4A	Ensure Subsistence Fund Custodian closes bank account after all creditors are paid and turn in excess funds to the supporting Accounting and Finance Office.	Food Service Office	AFR 146-7
4B	Determine the need for final audit of food service account once all transactions are complete and send request to residential auditor, if required.	Food Service Office	AFR 146-7

TABLE 9--Continued

Sequence Number	Action Item	OPR	Reference
5	Dispose of serviceable, expendable supplies and equipment as directed by the Command Equipment Management Office (CEMO) and Services Office.	Food Service Office	AFM 67-1
6A	Clean all food service equipment; leave equipment in place pending instruction from the CEMO.	Food Service Office	AFM 67-1
6B	Clean entire dining facility and notify site engineer when available for final closure and preparation for long-term storage.	Food Service Office	-
7A	Submit final food service operations reports; coordinate preparation with Command Services Office.	Food Service Office	-
7B	Transfer all MCAMS/SCAMS fund record and administrative documentation, eligible for disposal in 7 years or less, to local staging area; destroy documentation and reference material eligible for destruction.	Food Service Office	AFM 12-50
<u>Commissary</u>			
1	Commissary to cease sales to personnel and begin closure action.	Commissary Office	-

TABLE 9--Continued

Sequence Number	Action Item	OPR	Reference
<u>Site Exchange</u>			
1	Close site exchange for business, conduct final inventory, return merchandise to host base, close account and prepare building for long-term storage.	Exchange Office	-
<u>Linen Exchange Function</u>			
1	Review the inventory levels of the linen exchange function and reduce as appropriate. Reduce contractual requirements.	Unit Supply	AFM 67-1



TABLE 10

## COMMUNICATIONS-ELECTRONICS MAINTENANCE

Sequence Number	Action Item*	OPR	Reference
1A	Assign a communications-electronics (C-E) maintenance monitor to coordinate disposition of assets as directed. Provide name and telephone number to the Command CEM Office (LGKR).	CC	-
1B	Insure that one radar technician (Air Force Specialty Code 30372) is retained until all electronic equipment has been identified, removed, and prepared for shipment.	CC	-
2A	Inventory all C-E maintenance equipment.	Unit C-E Maintenance Office (LGK)	Technical Order (T.O.) 00-35D-2
2B	Insure all equipment is properly identified and correctly tagged concerning condition prior to shipment from site.	LGK	AFM 67-1

\*Unless otherwise indicated, closure actions are from PAD 79-14, Inactivation 655 RADS, Watertown AFS, NY, July 1979. These items are valid for small radar site closings according to HQ ADTAC/LGKE (77) and HQ ADCOM/KRC (33).

TABLE 10--Continued

Sequence Number	Action Item	OPR	Reference
2C	Submit tasking to Air Force Communication Command (AFCC) for removal of C-E equipment with redlined PCSP attached.	Command Communications and Requirements (KRCRP)	-
2D	Submit PCSP changes to reflect phase-out dates of C-E equipment.	Command or Intermediate HQ Communications Office (DOK)	AFR 100-18
3A	Remove all Command directed and installed modifications and documents (as applicable).	L GK	AFR 57-4
3B	If directed, provide certification of restoration of equipment to technical order (T.O.) specifications.	L GK	Applicable Equipment T.O.
3C	Prepare all equipment T.O.s for disposition.	L GK	T.O. 00-5-2
3D	Cancel site's forward supply point/bench stock authorizations and due-outs for equipment being removed and request redistribution instructions from host base supply.	L GK	AFM 67-1
3E	Cancel all radio frequency authorizations not required.	Command Operations Plans/Exercise Division	-

TABLE 10--Continued

Sequence Number	Action Item	OPR	Reference
3F	Return all Communications Security (COMSEC) material to the supporting COMSEC account, and advise them to declare the material as surplus.	LGK	-
4	Request savelists and disposition instructions from the Air Logistics Center (ALC) for all applicable equipment. NOTE: implement upon completion of 2C above.	Command	AFM 67-1
5A	Schedule the orderly removal of telephones (24:Atch.2).	CC	-
5B	Submit Telephone Service Requests.	Intermediate HQ DOK	-
6	Forward ALC savelists and disposition instructions to the inactivating unit and intermediate HQ.	Command LGK	AFM 67-1
7A	Comply with host base supply instructions on disposition of supply point/bench stock assets.	LGK	AFM 67-1
7B	Notify Command LGK and LGSE when ALC save-list actions are completed and provide savelists to Command LGK.	LGK	AFM 67-1

TABLE 10--Continued

Sequence Number	Action Item	OPR	Reference
8A	Monitor AFCC Electronic and Installation removal of C-E equipment.	Intermediate HQ DOK	-
8B	Submit PCSP changes as C-E equipment is removed.	Intermediate HQ DOK	AFR 100-18

TABLE 11

## SECURITY POLICE

Sequence Number	Action Item*	OPR	Reference
1A	Coordinate with host base Office of Special Investigation and Security Police concerning actions which can be taken during the closure to protect government property (24:Atch.1).	CC	-
1B	Consolidate storage of valuable, theft-attractive, or pilferage property, if possible, and change the locks or combinations on doors.	Security Police (SP)	AFR 67-10
2A	Terminate physical security program for Priority C facilities.	SP	-
2B	Remove restricted area signs from restricted area(s).	SP	-
2C	Terminate resources protection program.	SP	-
2D	Close and lock the site gate during non-duty hours, if possible (24:Atch.1).	SP	AFR 67-10
3A	Return government-owned firearms and ammunition to supply channels.	SP	AFM 67-1

\*Unless otherwise indicated, closure actions are from PAD 79-14, Inactivation 655 RADS, Watertown AFS, NY, July 1979. These items are valid for small radar site closings according to HQ ADTAC/SP (57).

TABLE 11--Continued

Sequence Number	Action Item	OPR	Reference
3B	Return Pass and Registration camera and laminating equipment to supply channels for redistribution.	SP	AFM 67-1
3C	Destroy blank identification forms (DD Forms 2AF, 1173, etc.) maintained by the issuing agency.	SP	AFM 12-50
3D	Return unused AF Forms 66, USAF Registered Vehicle, to Publications Distribution channels.	SP	AFR 7-2
3E	Destroy installation tab used with AF Form 66.	SP	
3F	Dispose of security police files and publications.	SP	AFM 12-50
4	Transfer law enforcement assistance arrangements between the site and local law enforcement agencies if such an agreement exists, or develop new assistance agreements for the caretaker force.	CC	-

TABLE 12

## ADMINISTRATION

Sequence Number	Action Item*	OPR	Reference
1	Determine and requisition required regulations, manuals, and T.O.s for closure process and for the caretaker force. Examples would be AFR 85-9, Inactive Installations-Inactivation and Maintenance, packing and crating T.O.s, and communications-electronics T.O.s (35:11).	Administration Office (DA)	-
2	Request disposition instructions for unit postal lock boxes.	DA	AFM 67-1
3A	Discontinue account for publications and forms with source of supply.	DA	AFR 7-2
3B	Obtain disposition instructions on excess forms (90:2).	DA	AFR 7-2
4A	Destroy documentation and reference material eligible for destruction.	DA	AFM 12-50

\*Unless otherwise indicated, closure actions are from PAD 79-14, Inactivation 655 RADS, Watertown AFS, NY, July 1979. These items are valid for small radar site closings according to HQ ADTAC/DA (20).

TABLE 12--Continued

Sequence Number	Action Item	OPR	Reference
4B	Ship all documentation eligible for staging and/or retirement to the host base.	DA	-
5	Furnish next higher headquarters copies of Standard Form 135, Records Transmittal and Receipt, on retired documentation.	DA	AFM 12-50
6	Discontinue unit mail service.	DA	AFR 182-1



TABLE 13

## MEDICAL DISPENSARY

Sequence Number	Action Item*	OPR	Reference
1	Notify host base Civilian Personnel Office of termination of part-time Civil Service physician.	CC	-
2	Request disestablishment of Dental Treatment Room.	Command Medical Office (SG)	-
3	Notify support base medical facility of disestablishment of Medical Aid Station (MAS).	Command or Intermediate HQ SG	-
4	Insure that prior to shipment that Class 6 inspections are performed on all foods shipped to other government agencies.	SG	-
5	Provide counseling for military and dependents regarding the use of uniformed services, medical facilities, including Veterans Administration activities and Public Health Services when available.	SG	AFR 168-9 and AFR 168-10

\*Unless otherwise indicated, closure actions are from PAD 79-14, Inactivation 655 RADS, Watertown AFS, NY, July 1979. These items are valid for small radar site closings according to 21st AD/SG (66).

AD-A087 224

AIR FORCE INST OF TECH WRIGHT-PATTERSON AFB OH SCHOOL--ETC F/6 5/1  
ANALYSIS OF THE PLANNING VARIABLE AS IT RELATES TO THE CLOSURE --ETC(U)  
JUN 80 R J HARVEY, G C KIESSLING  
AFIT-LSSR-14-80

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TABLE 13--Continued

Sequence Number	Action Item	OPR	Reference
6A	Report all on-hand medical/dental equipment to the Command SG by letter. List items by national stock number, description, quantity, age, and condition. (Cite condition codes as assigned by the medical equipment repair technician.) Forward one copy of the latest historical maintenance report, PCN N240611, with the report letter. Separately identify equipment in which the community has expressed an interest in acquiring. Dispose of equipment IAW Command-furnished instructions. Furnish the host Medical Equipment Management Office with one copy of all disposition instructions. Coordinate all disposal/transfer actions with interested parties. Transfer items to civil engineering which are to be donated to the local community. Dispose of all nonmedical supplies and equipment IAW unit supply's instructions. Turn in all medical supplies which cannot be used prior to closure to the host Base Medical Supply Office. Delete all equipment authorizations.	SG	AFM 67-1
6B	Brief all civilian providers of medical care on billing and payment procedures. After closure of MAS, billings for supplemental dependent medical care referred by Civil Service physician and military personnel medical care will be submitted to the closest Air Force	SG	AFM 168-4

TABLE 13--Continued

Sequence Number	Action Item	OPR	Reference
6B (cont'd)	medical treatment facility for verification and payment processing.		
7A	Reduce routine operating stocks on hand in the MAS to a two-weeks' supply.	SG	-
7B	Forward medical and dental health records for military personnel to unit or other responsible agency for reassignment, retirement, etc.	SG	AFM 168-4
7C	Forward or retire medical records of non-military personnel and all unit records.	SG	AFM 168-4 and AFM 12-50
8A	Prepare "Final Reports" for all reports peculiar to the MAS as required by higher headquarters directives.	SG	-
8B	Post turn-in of controlled drugs and/or precious metals to appropriate registers to achieve zero balance.	SG	-
8C	Forward or retire prescription files, register of controlled drugs and/or precious metals, bioenvironmental engineering case files, and other correspondence to appropriate agencies.	SG	AFM 12-50

TABLE 13--Continued

Sequence Number	Action Item	OPR	Reference
8D	Cancel on order medical/dental supplies which cannot be delivered and administered or dispensed prior to closure..	SG	AFM 67-1
9	Turn in emergency ambulance to the host base Transportation Officer	SG	AFM 67-1

potential loss to the Air Force of \$1,000 while one omission at St. Albans AFS could represent a possible loss of \$50,000. The results are summarized in Table 14.

The specific omissions for each site are listed in Table 15. They are identified by the "Sequence Number" listed in the PAD Closure Actions portion of this chapter. Each omission is grouped under the number of site PADs which did not contain that particular action item. This way, the same omissions from site to site can be easily seen.

A summary of the omissions for each site is depicted in the histogram shown in Figure 2.

The findings indicate that the value of the planning variable (the completeness factor) does in fact change over time. However, there is not a significant difference in the number of omissions in each PAD (as compared to each other PAD). Additionally, there is no significant trend in the completeness of planning as it changes over time. This information will be used to analyze the research proposition in the next chapter.

TABLE 14

## RADAR SITE PAD OMISSIONS

Radar Site	PAD Number	Date of PAD	Number of Omissions
1. Antigo AFS, WI	77-2	March 1977	43
2. Blaine AFS, WA	78-6	July 1978	39
3. St Albans AFS, VT	78-20	December 1978	35
4. Lockport AFS, NY	78-21	December 1978	34
5. Fortuna AFS, ND	79-1	March 1979	37
6. Havre AFS, MT	79-2	March 1979	35
7. Minot AFS, ND	79-3	March 1979	36
8. Opheim AFS, MT	79-4	March 1979	34
9. Baudette AFS, MN	79-11	June 1979	27
10. Sault Sainte Marie AFS, MI	79-12	June 1979	27
11. Watertown AFS, NY	79-14	July 1979	21

TABLE 15

## SPECIFIC PAD OMISSIONS

Site Name (s)	Omission(s) Identified by Sequence Number
A. Antigo, Blaine, St. Albans, Lockport, Fortuna, Havre, Minot, Opheim, Baudette, Sault Sainte Marie, and Watertown	Planning--1, 3, and 4 Administration--1 and 5 Budget--1, 2A, 2B, 3 and 4 C-E--3A Civil Engineering--2C Security Police--1A Supply--2B, 2C, 2D, 2F and 2Q
B. Antigo, Blaine, St. Albans, Lockport, Fortuna, Havre, Minot, Opheim, Baudette, and Sault Sainte Marie	Supply--2G
C. Antigo, Blaine, St. Albans, Lockport, Fortuna, Havre, Minot, Opheim, and Sault Sainte Marie	Transportation--1B
D. Antigo, Blaine, St. Albans, Lockport, Fortuna, Havre, Minot, and Opheim	MWR Activities--8D Supply--2E
E. Blaine, St. Albans, Lockport, Fortuna, Havre, Minot, Baudette, and Sault Sainte Marie	Administration--2
F. Blaine, St. Albans, Fortuna, Havre, Minot, Opheim, Baudette, and Sault Saine Marie	MWR Activities--7



TABLE 15--Continued

Site Name(s)	Omission(s) Identified by Sequence Number
G. Antigo, Blaine, St. Albans, Lockport, Fortuna, Havre and Opheim	MWR Activities--9E
H. Antigo, St. Albans, Lockport, Fortuna, Havre, Minot and Opheim	Supply--2M
I. Blaine, St. Albans, Lockport, Fortuna, Havre, Minot and Opheim	MWR Activities--3E
J. Antigo, Blaine, St. Albans, Lockport, Havre, and Opheim	MWR Activities--9D
K. Antigo, Blaine, Havre, Baudette, Sault Sainte Marie, and Watertown	Security Police--2D
L. Blaine, St. Albans, Lockport, Fortuna, Havre, and Minot	Civil Engineering--2A
M. Blaine, Lockport, Fortuna, Havre, Minot, and Opheim	Housing Office--1B
N. St. Albans, Lockport, Fortuna, Opheim, Sault Sainte Marie, and Watertown	Civil Engineering--2B
O. Antigo, St. Albans, Lockport, Fortuna, and Opheim	Operations and Intelligence--2C
P. Blaine, Havre, Minot, Baudette, and Sault Sainte Marie	MWR Activities--3H

TABLE 15--Continued

Site Name(s)	Omission(s) Identified by Sequence Number
Q. Havre, Minot, Opheim, Baudette, and Sault Sainte Marie	Supply--20
R. Blaine, Fortuna, Havre, and Baudette	Transportation--1D
S. Antigo, St. Albans, and Lockport	Supply--3
T. Antigo, Blaine, and Baudette	Security Police--1B
U. St. Albans, Lockport and Minot	Logistics--1B
V. Fortuna, Havre, and Minot	Housing Office--2A
W. Antigo, and Fortuna	MWR Activities--3J
X. Antigo, and Minot	Security Police--3E
Y. Antigo, and Opheim	C-E--8B
Z. Blaine, and Minot	Civil Engineering--7 and 8 Dining Hall-4A
AA. St. Albans, and Minot	Logistics--1A
BB. Fortuna and Minot	Housing--1C
CC. Baudette, and Sault Sainte Marie	Supply--2A

TABLE 15--Continued

Site Name (s)	Omission(s) Identified by Sequence Number
DD. Antigo	General Personnel--2 Manpower and Organizations--1, 2, and 3 MWR Activities--1 Security Police--2C and 3D Supply--2I, 2K, 2L and 2P
EE. Blaine	Library--1C MWR Activities--3F Testing Section--2
FF. St. Albans	Civil Engineering--3D
GG. Lockport	MWR Activities--3K
HH. Fortuna	Civil Engineering--5 Supply--2N
II. Havre	Civil Engineering--6
JJ. Opheim	MWR Activities--9A, 9B and 9C
KK. Sault Sainte Marie	Dining Hall--7B
LL. Watertown	Transportation--2A

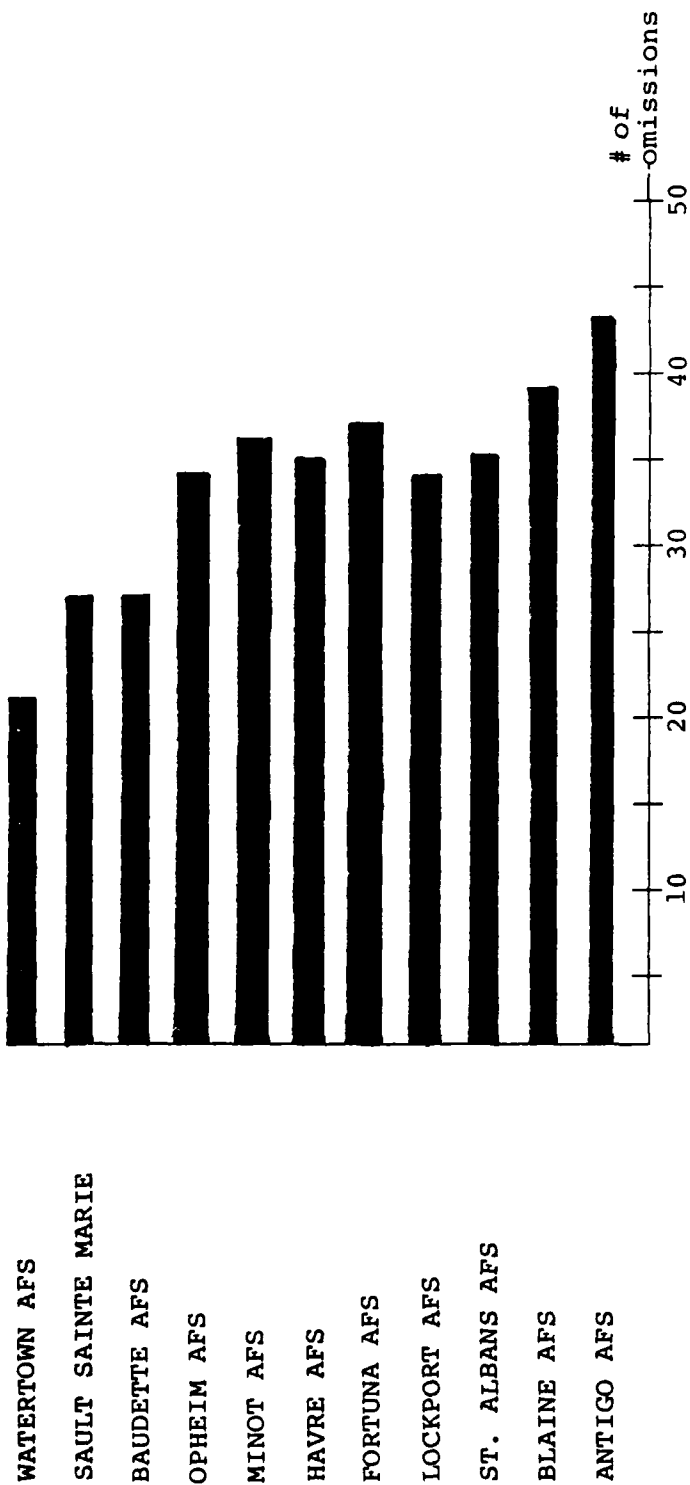


Fig. 2. Histogram of Omissions

### Summary

This chapter presented suggestions as to what information should be included in a small unit deactivation PAD. Most of the suggested inputs were obtained from past ADCOM deactivation PADs, former ADCOM radar site commanders, Lessons Learned Letters, and Air Force Audit Reports. Based on a comparison between this suggested PAD and the number of omissions documented in the PADs of those ADCOM LRR sites selected for this study, there is an indication that the thoroughness of planning for these closures has not been complete.

## CHAPTER IV

### RADAR SITE CLOSURE EFFECTIVENESS

#### Introduction

This chapter contains a discussion of the findings relative to research objective two. The purpose of this objective was to determine the effectiveness of the closure process for each of the radar sites analyzed in research objective one. This was accomplished by investigating the following research questions:

1. What objectives constitute an effective closure?
2. What is the degree of agreement between headquarters personnel and site commanders as to what constitutes an effective closure?

Additionally, this chapter investigates possible associations between selected measurements for complete planning and for the objectives of an effective closure.

#### Research Question Four Results

Before a determination could be made as to the effectiveness of the closure processes for the radar sites in this study, research question four (What objectives constitute an effective closure?) had to be investigated. The purpose of this question was twofold. First, an attempt was made to get some idea of what the personnel who are

actually involved in the closure process are using as key objectives in deactivating the sites. Second, the responses formed a basis for investigating specific mechanisms in which the effectiveness of the closures might be measured.

As explained in Chapter II, page 22, only personnel actively involved in the planning and actual closure processes were contacted. The list of personnel contacted follows:

<u>Personnel Contacted</u>	<u>Position</u>
Lt Col Thomas (83)	HQ/USAF
Maj Lee (58)	HQ USAF
Col Ravetti (76)	HQ ADCOM/AC
Lt Col Demijohn (28)	HQ ADTAC/XPP
Lt Col Hester (51)	HQ ADTAC/LGS
Mr. Holland (52)	HQ ADTAC/DEE
Capt Petric (73)	20 AD/LGS
No response	21 AD/LG
Lt Col Dahle-Melsaether (25)	23 AD/LG
Col. Russell (78)	24 AD/LG
Mr. Pierce (74)	25 AD/LG
No response	26 AD/LG
No response	20 AD/ACB
No response	21 AD/ACB
Mrs. Thielke (82)	23 AD/ACB
Mr. Godfrey (46)	24 AD/ACB

<u>Personnel Contacted</u>	<u>Position</u>
No response	25 AD/ACB
Mrs. Davis (27)	26 AD/ACB
Lt Col Edwards (34)	Commander, Lockport AFS
Lt Col Meyer (65)	Commander, Charleston AFS
Lt Col Ziebold (91)	Commander, Havre AFS
Maj Cleckler (23)	Commander, Opheim AFS
Maj Dmochowski (31)	Commander, Blaine AFS
Maj Ellis (37)	Commander, Finley AFS
Maj Hughes (55)	Commander, Finland AFS
Maj McDonough (59)	Commander, Fortuna AFS
Maj Nakamoto (68)	Commander, Sault Ste. Marie AFS
Maj Zelenski (89)	Commander, Baudette AFS
Capt Ford (42)	Commander, Watertown AFS
Capt Trithart (85)	Commander, Minot AFS
No response	Commander, St. Albans AFS

This list of interviewees provided 13 headquarters personnel and 12 site commanders.

As explained in Chapter II, the telephone interview instrument (Appendix C) was used to elicit responses.<sup>9</sup>

There are two important points about the following list of replies that the reader must keep in mind. First, many

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<sup>9</sup>For this section of the research, only question 3a. of Appendix A was of interest. The other questions related to other parts of this thesis or were used to gather recommendations.



of the responses to the question were similar in nature, but not necessarily exact. The categories presented below represent a consolidation of the replies which summarizes the particular point to be made. Second, some of the replies give conflicting advice and/or opinions. No attempt was made to segregate these from the list. These responses are not necessarily endorsed by the authors of this thesis. Particularly, many of the suggested measurements are not specific enough to be defined operationally nor relate to the objective they purport to measure.

Responses to question 3a. of Appendix C appear below. After each objective is listed the consolidation of the replies which summarizes the particular point to be made; total number of respondents in each category (headquarters personnel and commanders); an overall analysis of the response totals; and a list of the suggested measurements obtained from answers to question 3b. of Appendix C.

1. Objective 1: Close the site within budgetary constraints.

a. Related responses were:

(1) If the closure is primarily initiated for economic reasons, then the overriding objective is to save money.

(2) Minimize total costs.

b. Headquarters personnel responses: 4 out of 13 or 31 percent.

- c. Commander's responses: 3 out of 12 or 25 percent.
- d. Overall responses: 7 out of 12 or 25 percent.
- e. Suggested measurements:

(1) Comparing the cost of closure to the budgeted amount. This could be accomplished by a financial closure plan which accurately measures monies spent during important milestone dates.

(2) For the deactivation of large Air Force installations (e.g., Craig and Webb AFSs), the cost accounting personnel at HQ USAF measure the actual cost of the closure. However, for small installations (e.g., the ADCOM sites closing under JSS), HQ USAF only calculates predictive savings; e.g., how much money the Air Force will save annually by deactivating a particular site.

2. Objective 2: Redistribute the site's materiel assets in a timely manner.

- a. A related response was maximizing the reuse potential of the site's assets.
- b. Headquarters personnel responses: 8 out of 13 or 62 percent.
- c. Commander's responses: 11 out of 12 or 92 percent.
- d. Overall responses: 19 out of 25 or 76 percent.

e. Suggested measurement: The timely redistribution of supplies and equipment. Are many supplies being left behind at the site because of lack of guidance from government planners both within the Department of Defense and the Office of Economic Adjustment?

3. Objective 3: Effectively employ remaining personnel while transferring excess personnel in a timely manner.

a. A related response was if the closure is mainly due to mission or technological change, then the most important objective is to shift manpower.

b. Headquarters personnel responses: 8 out of 13 or 62 percent.

c. Commander's responses: 10 out of 12 or 83 percent.

d. Overall responses: 18 out of 25 or 72 percent.

e. Suggested measurements:

(1) The timely reassignment of personnel and the effective utilization of remaining personnel.

(2) The satisfaction of personnel with their assignments and the overall morale of the unit.

4. Objective 4: Meet the overall closure date and accomplish individual PAD actions by the appropriate suspense dates.

a. Related responses were:

(1) Having an orderly deactivation with minimum of turbulence.

(2) Closing buildings, and terminating functions and utilities on time.

b. Headquarters personnel responses: 9 out of 13 or 69 percent.

c. Commander's responses: 7 out of 12 or 58 percent.

d. Overall responses: 16 out of 25 or 64 percent.

e. Suggested measurement: Completing on time and IAW the individual actions specified in the PAD and outlined in Air Force directives. Milestone dates concerning such things as personnel, equipment removal and building closures could be tracked by a PERT chart, bar-graph and status derived from ADCOM Forms 193.

5. Objective 5: Achieve an orderly transition of the site to the gaining agency:

a. Related responses were:

(1) Minimize adverse impacts on the local community.

(2) Hiring an adequate caretaker force.

(3) Establishing a close and good relationship with the agency which will assume responsibility for the deactivated site. For example, there should be

close coordination with GSA and the Office of Economic Adjustment on the follow-on usage of the site's buildings and equipment.

(4) Transferring the site to new uses or owners should be accomplished in a timely manner.

(5) Establish a special telephone number for use by the local populace for asking questions and receiving responsive answers.

b. Headquarters personnel responses: 3 out of 13 or 23 percent.

c. Commander's responses: 3 out of 12 or 25 percent.

d. Overall responses: 6 out of 25 or 24 percent.

e. Suggested measurement: The condition of closed down facilities and stored equipment and supplies.

6. Objective 6: Insure that advanced planning is thoroughly accomplished:

a. Related responses were:

(1) The quality of advanced planning (e.g., the thoroughness of contingency planning, personnel phasing, and the development of realistic milestone charts). Were advance surveys conducted and were they effective in identifying and resolving problems?

(2) Deactivating the site when the effects of bad weather can be minimized (e.g., do not close northern tier sites in the winter).

b. Headquarters personnel responses: 4 out of 13 or 31 percent.

c. Commander's responses: 2 out of 12 or 17 percent.

d. Overall responses: 6 out of 25 or 24 percent.

e. Suggested measurements:

(1) The ability to resolve problems at the lowest possible level.

(2) The quality of management--did the closure occur "in spite of management?"

(3) The judicious and timely phase-out of service activities thereby minimizing morale problems which could arise because of too early a closure date.

(4) The amount and type of problems faced by closure committees both at site and higher headquarter levels.

(5) Opinions by higher headquarters personnel as to how the closure is progressing.

7. Objective 7: Maintain mission effectiveness until operations are terminated.

a. Related responses were:

(1) Providing the site with adequate  
manning and assets.

(2) Insuring that site activities such  
as quarters and messing are utilized to the maximum extent  
in support of remaining personnel and equipment removal  
teams.

b. Headquarters personnel responses: 2 out  
of 13 or 15 percent.

c. Commander's responses: 2 out of 12 or  
17 percent.

d. Overall responses: 4 out of 25 or 16 per-  
cent.

e. Suggested measurements: none.

8. Objective 8: Protect and secure government  
assets.

a. Related responses were:

(1) Prior to and during transfer, resources  
should be protected from damage, theft, vandalism or  
loss (e.g., maintenance of proper accountability).

(2) The site should be left in a good  
state of repair and effective steps initiated to prevent  
deterioration or loss of resources through climatic condi-  
tions and theft, respectively.

b. Headquarters personnel responses: 3 out  
of 13 or 23 percent.

c. Commander's responses: 2 out of 12 or 17 percent.

d. Overall responses: 5 out of 25 or 20 percent.

e. Suggested measurement: The ability of the site to minimize theft and otherwise loss of supplies and equipment.

Table 16 summarizes the results for the convenience of the reader.

TABLE 16  
IMPORTANCE OF OBJECTIVES

Objective	HQ Personnel Responses (out of 13)	Commanders' Responses (out of 12)	Overall (out of 25)
1	4 (31%)*	3 (25%)	7 (28%)
2	8 (62%)	11 (92%)	19 (76%)
3	8 (62%)	10 (83%)	18 (72%)
4	9 (69%)	7 (58%)	16 (64%)
5	3 (23%)	3 (25%)	6 (24%)
6	4 (31%)	2 (17%)	6 (24%)
7	2 (15%)	2 (17%)	4 (16%)
8	3 (23%)	2 (17%)	5 (20%)

\*Percent of each category is in parentheses.

The objectives listed above represent the key concerns of the personnel involved in the closure process. Overall, planners and commanders were most concerned with



the effective redistribution of materiel (objective 2) and personnel (objective 3), and with the timely completion of PAD action suspenses. As individual groups, commanders were most concerned with their men and materiel, while the headquarters planners were most concerned with the timely completion of the PADs (objective 4).

#### Research Question Five Results

Results garnered from the answers to question 3a., Appendix C, provided the data, as listed on page 103, necessary to analyze research question five. This question seeks to ascertain if there is some degree of agreement between site commanders and HQ personnel involved in radar site closures as to what objectives constitute an effective closure. Figure 3 highlights the manner in which each group responded and their agreement or disagreement.

The statistical test that was used to determine the significance of difference (if any) between the two groups was the  $\chi^2$  test for two independent samples. Basically, this statistical test takes the frequency counts in various categories for two samples and attempts to determine if the samples could have come from the same population. In this situation, a count of the number of responses from each group was made for each objective. Next, the proportion of responses from one group in the various objectives was compared to the proportion of

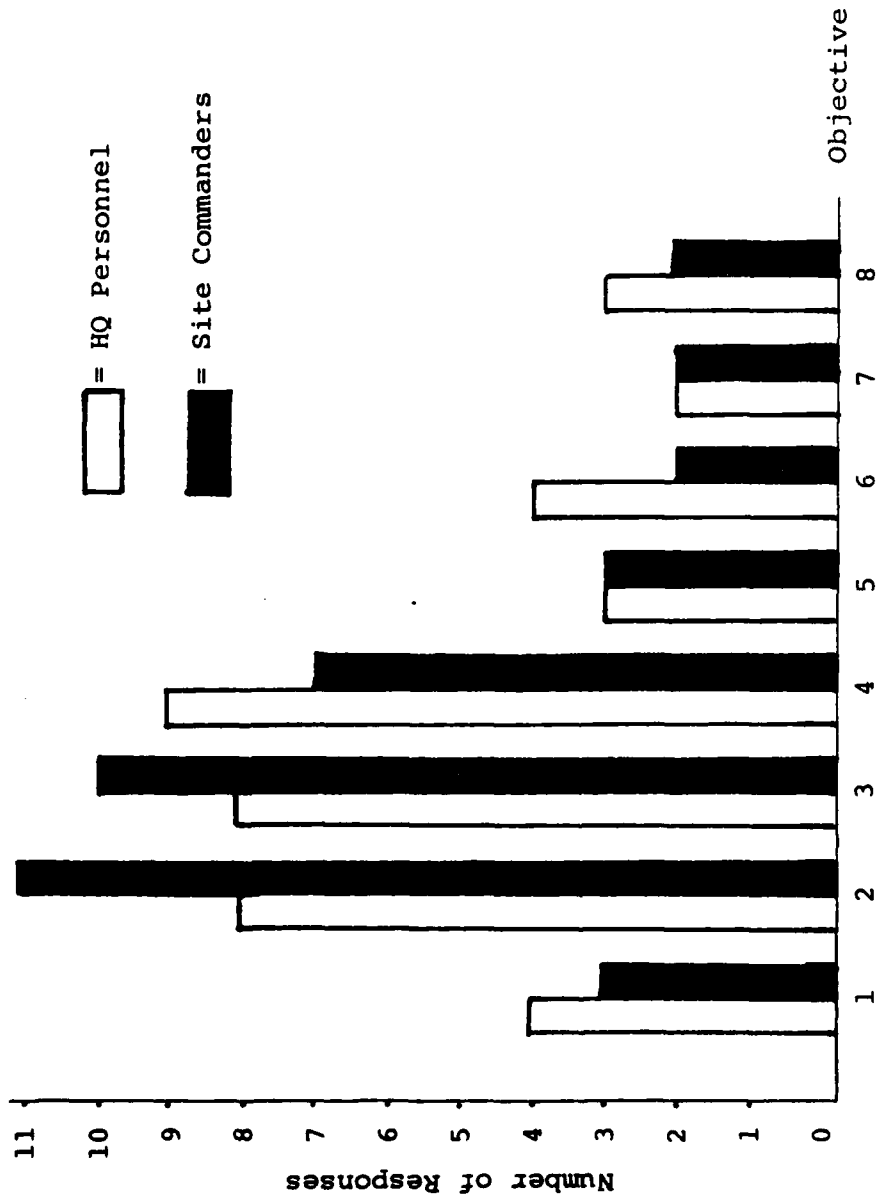


Fig. 3. Breakout of Number of Responses by Objective

responses for the other group (80:104). The test statistic was computed using the SPSS subprogram CROSSTABS (18:218-240), as formatted in Appendix G, which provides for, among other statistics, the computation of the  $\chi^2$  statistic. The hypotheses to be tested are as follows:

- $H_0$ : Management position (e.g., a HQ personnel planner or site commander) is not independent of establishing the objectives of an effective closure.
- $H_1$ : Management position is independent of establishing the objectives of an effective closure.

The statistical test attempts to prove whether the two subpopulations (HQ planners and site commanders) do in fact come from the same major population. That is, are planners in both organizations looking at what objectives constitute an effective closure in much the same manner. A summary of the procedure to test the null hypothesis follows:

1. The observed frequencies were cast in the cross-tabulation table (Table 17)  $r$  rows (groups) by  $k$  columns (objectives). For this test  $r=2$ ,  $k=8$  (80:100).
2. Degrees of freedom needed for the test is computed by the formula:  $df=(r-1)(k-1)=(2-1)(8-1)=7$  degrees of freedom.
3. As computed by the SPSS CROSSTABS program (Table 17), the value of the  $\chi^2$  is 1.75543 at 7 degrees of freedom.

TABLE 17

## SPSS CROSS-TABULATION TABLE FOR AGREEMENT ANALYSIS

## AGREEMENT ANALYSIS

04/26/80

FILE 6CM55 (CREATION DATE = 04/26/80) DEGREE OF AGREEMENT

\*\*\*\*\*  
 GROUP CROSS-TABULATION OF  
 GROUP RESPONDING BY OBJECTIV  
 \*\*\*\*\*

## OBJECTIV

## COUNT

ROW	PCT	ISAVE	NON	MOVE	MAT	MOVE	PEO	CLOSE	ON	TRANSITI	PLANS	MISSION	PROPERTY	ROW				
COL	PCT	IEY			ERIEL	PLE		TIME	ON				SECURE	TOTAL				
101	PCT	1	1	1	2	1	3	1	4	1	5	1	6	1	7	1	8	1
-----I																		

RAW CHI SQUARE = 1.75543 WITH 7 DEGREES OF FREEDOM. SIGNIFICANCE = 0.9721

4. This is a very small  $\chi^2$  and, along with the computation of the significance factor of 0.9721, shows that the null hypothesis cannot be rejected (80:109) at the 95 percent confidence level (seen Appendix H for Siegel's table of significant  $\chi^2$  values).

Thus, the conclusion that management position is not independent in the establishment of the objectives of an effective closure, and that the two groups in question do have some degree of agreement, can be accepted. This conclusion implies that there is no significant difference between the perspectives of headquarters and site personnel with respect to the objectives to be accomplished in closing the radar site.

#### Measurement of Closure Objectives

Prior to testing for possible correlations between the number of PAD omissions, as developed in Chapter III, and the effective closures of the radar sites, suitable measurements for an effective closure had to be developed. In the process of determining suitable measurements for each objective, it was discovered that, with the exception of objective 4, no formal means of measurement were available at any management level. This is true basically because at the time of the radar site closure in question, the objectives established through the efforts of this thesis were not part of the formal process involved in the

closure of these sites. Informal, or subjective, measurements, although available at some radar sites, were not available at all of them. Additionally, the types of data available were not congruent across the board, making analyses of like variables very difficult.

This section of the thesis contains a discussion of each objective, the problems associated with this measurement (or lack of same), and the significance, if any, of not having a measurement available.

1. Objective 1: Close the site within budgetary constraints. Although the budgets of each radar site are monitored closely, no problems were experienced with each site closing within its allocation. This was primarily because the allotted dollar amount projected to close the site was set way above the actual amount needed to close the site. The difference was then adjusted back to the actual amount of the budget quarter after the site closed (76). Thus, the value of this measurement was constant. In effect, this practice puts no boundaries on the measurement of one of the objectives and virtually eliminates it as a viable source of data to be used in the correlation analysis.

2. Objective 2: Redistribute the site's materiel assets in a timely manner. A possible measurement would be the dollar value of supplies left on the site after the official site closure date. Another measurement would be

the time it took to ship materiel to meet urgent requirements. Discussion with the interviewees revealed that this information was not being recorded at all. Additionally, many supplies were left behind at a radar site until a firm requirement was generated from them.

3. Objective 3: Effectively employ remaining personnel while transferring excess personnel in a timely manner. Again, because of the lack of documentary records, this objective could not be measured for the sites analyzed in this study. One radar site commander informally kept track of how remaining personnel were being utilized by means of a "personnel job" chart kept in his office. He thought that this method would have merit for further closures.

4. Objective 4: Meet the overall closure date and accomplish individual PAD actions by the appropriate suspense dates. Although all the overall closure dates of the eleven radar sites were met, it was still possible to measure the timely accomplishment of individual PAD action items. HQ ADCOM uses ADCOM Form 193 (see Appendix E) to monitor the completion of individual PAD actions. A count of the suspense date slippages gives an indication of the amount of closure delays during the process.

5. Objective 5: Achieve an orderly transition of the site to the gaining agency. The only suggested measurement advanced was the condition of both the closed

facilities and any stored equipment and supplies. Even though it has not been done, this could be accomplished by periodically inventorying and appraising the value of a deactivated site's property. This value could then be compared to the value of the site when it was closed. These appraisals possibly will be accomplished when the government transfers the use of the site to new tenants or owners.

6. Objective 6: Insure that advanced planning is thoroughly accomplished. Again, none of the headquarters or site personnel formally tracked this objective. Instead, they seemed to have formed their own subjective opinions as to the quality of closure planning as events took shape. The standards used varied from person to person. One headquarters person said that he would measure this partly by the number of Inspector General complaints received.

7. Objective 7: Maintain mission effectiveness until operations are terminated. Even though no responses were received on how this objective could be measured, the persons interviewed indirectly hinted that they would intuitively judge the achievement of this objective by the ability of the site to perform its mission and assigned tasks. Opinions varied as to the meaning of this objective and probably because of its subjectiveness no records



were maintained within ADCOM/ADTAC on the success in achieving this goal.

8. Objective 8: Protect and secure government assets. As with the other objectives where no formal measurements were taken, no systematic attempt was made to record the dollar value of government property lost, stolen, damaged, or destroyed during the closure process. Piecemeal figures are available through documents such as reports of survey and security police reports, but an overall figure of total losses for each site was unavailable.

It is apparent from the above list, only objective 4 is now measurable. Closure delays from all the sites were counted with use of the ADCOM Forms 193. These forms were accomplished by either the appropriate site, air division, or HQ ADTAC.<sup>10</sup> A closure delay was determined by comparing

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<sup>10</sup> Copies of the individually prepared ADCOM Form 193 for each of the deactivated radar sites in this study can be obtained from one of the following sources:

1. HQ ADTAC/XPPX, Plans and Program Division, Peterson AFB CO 80914;
2. 21st AD/ACB, Budget Office, Hancock Field NY 13225 for Lockport, St. Albans, and Watertown AFS;
3. 23rd AD/LG, Director of Logistics, Duluth International Airport MN 55814 for Antigo, Baudette, and Sault Sainte Marie AFSs;
4. 24th AD/LG, Director of Logistics, Malmstrom AFB MT 58402 for Fortuna, Havre, Minot, and Opheim AFSs;
5. 25th AD/LG, Director of Logistics, McChord AFB WA 98438 for Blaine AFS; or
6. Contacting the caretaker force at the deactivated site in question.

the date entered in the "date completed" column (H) of the ADCOM Form 193 (reference Appendix E) to the due date as stated in the "completeion date" column (D) of the appropriate PAD. The results are shown in Table 18. This information will be used in this chapter as the dependent variable in the correlation analysis.

Responses to Questions 3c. to 3f.  
of Appendix C

The more or less verbatim responses to questions 3c. to 3f. of Appendix C are presented below. These are simply an enumeration of personal opinions expressed by the respondents and are listed for informational purposes only. It will be up to the reader to judge the quality of each response.

Appendix C, Question 3c. (What actions taken in deactivating ADCOM radar sites have significantly contributed to successful closures and should be replicated in future PADs?)

Responses to question 3c. which are pertinent to inclusion in a deactivation PAD are included in Chapter III under the overview or detailed checklist section of the PAD. Other replies or comments were:

1. Prior to closure, ADCOM Civil Engineering sent a team to the deactivating sites to formulate a Facility Closure Plan which addressed such questions as building closure and utility termination schedules. Also, this

TABLE 18  
SUMMARY OF CLOSURE DELAYS

Radar Site	Closure Delays	Total Number of Action Items in the PAD	Percentage of Delays
Antigo AFS	16	197	16/197 = 8.1%
Blaine AFS	27	200	27/200 = 13.5%
St. Albans AFS	18	194	18/194 = 9.3%
Lockport AFS	16	178	16/178 = 9.0%
Baudette AFS	25	176	25/176 = 14.2%
Havre AFS	12	197	12/197 = 6.1%
Opheim AFS	19	209	19/209 = 9.1%
Fortuna AFS	15	190	15/190 = 7.9%
Minot AFS	10	180	10/180 = 5.6%
Sault Sainte Marie AFS	11	162	11/162 = 6.8%
Watertown AFS	4	167	4/167 = 2.4%

action was of great assistance in resolving the multitude of civil engineering problems which occur during a site deactivation. The ADCOM Supply Inventory Team also visited the sites in advance of the deactivation date and performed well in resolving problems arising in their area of concern.

2. The site commander initiated a biweekly phase-down status report to the Air Division thereby forcing him to think through the problem areas while at the same time insuring that headquarters personnel are fully aware of the total situation at the site.

3. The PAD allowed the site commander some flexibility as to when buildings and activities could be terminated along with providing the commander authority to adjust required completion dates (within reason) on individual PAD action items. Overall, the PAD was a good guide.

4. References to applicable Air Force directives in the PAD were extremely helpful to site personnel who were not that familiar with a closure action. However, many action items failed to contain any reference thereby opening the possibility for misinterpretation or taking the wrong action.

5. The Personnel Section of the ADCOM closure PADs was extremely thorough.

6. The ADCOM PAD had key OPRs identified by name and phone number.

7. The site commander charged with the closure must be strong and extremely capable. There must be personal innovation, ingenuity, and flexibility by site personnel to resolve the many unique problems which arise during the closure process.

8. Vigorous action was taken by the site commander to control rumors by presenting factual information in an expeditious manner.

Appendix C, Question 3d. (Suggestions  
for improving the quality of the PADs  
or the planning process for site closures)

1. Prior to operations cease date, Manpower and Personnel Center (MPC) has probably taken action to terminate incoming personnel assignments. At the same time, the site is probably losing personnel, both military and civilian, due to transfers, retirements, and separations. Therefore, the capability of the site to submit routine reports, and to accomplish other normal tasks could be hampered, especially if key skills are lost. To recognize this loss of key manpower, a coordinated written schedule between the headquarters and the site should be developed which will relieve the site of certain routine responsibilities, if possible. This plan would be effective for that period prior to the PAD implementation date.

2. If a series of installations are scheduled for closure, someone with recent experience in deactivating a small unit should head a team to visit each closing site to assist in local planning, to coordinate higher headquarters support, and to provide advance guidance.

3. The PADs did not appear to be well coordinated and some of the instructions contained therein were inconsistent. For instance, at one site civil engineering was instructed to shut down the waste disposal plant weeks before the work areas and base housing were evacuated. Also, at the same site the PAD directed that all communications be terminated, except for one commercial line, two months before the scheduled closure date. In general, the PAD did not seem to be tailored to the current situational environment faced by the individual site.

4. The site commander should be given the authority and encouragement to use remaining personnel for assisting in the dismantling, packing and crating, and movement of mission equipment. If outside technical advice is required, then selected personnel could be sent on temporary duty (TDY) to the site to supervise the work. This would be in lieu of the present policy which is to send in a whole removal team on an extended TDY which can be very expensive. Even if site personnel complete a fraction of this work, the savings could be significant.

5. The PAD should involve available National Guard and Reserve personnel in the deactivation process. They could be assigned to such jobs as packing and crating, and transportation support. Adopting this policy could avoid the need for sending packing and crating personnel to the site on a TDY basis, and could reduce commercial transportation charges.

6. The site commander should remain through the entire closure period to provide top management continuity. If possible, a senior NCO should remain behind after the closure to assist the caretaker force in the transition period and to resolve remaining military type problems.

Appendix C, Question 3e. (What have been the main problems experienced in deactivating a radar site?)

Replies were:

1. Delays in having the FAA assume responsibility for USAF radar sites under JSS caused a slippage in the close down schedule and "turbulence" in the closure planning process. If HQ USAF reasonably expects a slippage, they should immediately alert the affected parties so they can plan accordingly. Contingency plans were not developed to cover the possibility that a decision would be made at a later date to either delay closure or to leave the site open indefinitely.

2. Because some site commanders did not have the facts as to when their site would deactivate or how to handle pending closure announcements, they were unable to handle rumors effectively. Possibly, the site commanders should be sent to the MAJCOM for a preliminary closure briefing.

3. Planning for the closure in many instances was started too late. Even though MAJCOM knew in advance that the site was closing, they delayed issuance of the PAD which in turn delayed local planning to a very late date. Another comment was made that the MAJCOM PAD OPR never tried to adopt existing base closure models to a site phase-down.

4. Coordination with other Commands such as the Air Force Commissary Service (AFCOMS), Army and Air Force Exchange Service (AAFES), and Northern Communication Service was poor.

5. ADCOM OPRs in many cases seemed to be acting independently of each other or were not communicating among themselves. Sometimes they were reluctant to effect coordination among themselves thereby putting the onus on the site to resolve conflicts in MAJCOM advice. Further, there were instances where a person identified in the closure PAD as the OPR for a particular ADCOM action agency did not know that he or she had been assigned that responsibility. Some OPRs probably failed to realize that site personnel, in many instances, were novices at deactivating



units. Therefore, more Command guidance and advice would have been helpful and appreciated.

6. Some FAD action items were not thoroughly completed. This was mainly caused by a lack of coordination with all involved personnel. For example, in too many cases, budget personnel were not involved in both the development of the PAD action items nor the responsibility for completing items which concerned the expenditure of funds. Furthermore, many personnel concerned with the closure process were not aware that financial requirements actually rise during the closure process (e.g., the requirement to fund civilian transportation transfers).

7. Last-minute personnel reassignments or changes in reporting dates caused both morale and administrative problems (e.g., a change in a reporting date may mean that a performance report and recommendation for decoration may have to be redone). Also, these assignment changes caused problems in coordinating household goods shipments.

8. Guidance for the disposition of both appropriated and nonappropriated equipment and supplies was either slow in coming or in conflict with earlier advice. The resulting negative consequences were many. Personnel normally plentiful during the early part of a phase-down were not available to assist in moving the property when disposition authority was finally received. Other operational Air Force units had difficulty in obtaining

serviceable equipment and supplies because of policy that many of these items remain on site for possible future disposition action. Further, some of the left behind materiel could deteriorate because of climatic conditions. Also, decisions on what MWR equipment could be turned over to the local community were lacking.

9. Disposition instructions were also lacking as to the proper disposition of hazardous chemical decontaminates (e.g., polychlorinated biphenyls).

10. Transportation support for moving large items such as diesel generators was poor.

11. Because of the lack of clear guidance as to the site's responsibility for accomplishing tasks such as dismantling equipment and performing packing and crating work, it was difficult to develop a time phased plan for reducing manpower requirements as the workload diminished.

12. Too much time was spent in determining caretaker requirements, job descriptions, and hiring procedures, etc. The job descriptions for the caretaker force did not allow the full assignment of responsibility for the performance of general or unique duties that are associated with managing a deactivated site. Also, some site commanders in their attempt to protect the jobs of their civilian employees would inflate the manpower requirements for their caretaker force.

13. A lack of understanding by planners as to what possible future uses will be made of the site.

Appendix C, Question 3f.  
(General comments)

Most of the general comments made during interviews were incorporated in the preceding paragraphs. However, there is one response which summarizes many of the comments made above. Basically, the comment was made that for a closure to be successful, the PAD must be well written and higher headquarters must have a good staff to handle the multitude of problems which occur.

Correlation Analysis

The research proposition, as explained in Chapter II, involves an analysis of the correlation between factors measuring the completeness of planning (PAD omissions) and factors measuring the effectiveness of the closure process (closure delays). Based on these measurements, a correlation analysis was made of the possible association that a lack of complete planning has on the effectiveness of the closure process. This chapter contains a description of the tests used to study this association, and the conclusions reached concerning their correlation.

Proposition Test

The data to be used for the correlation analysis was gathered through the research employed in the

investigation of research objectives one and two. Specifically, the (theoretical) independent variable X is classified as the number of omissions in each PAD studied, the measure of the completeness of planning; the (theoretical) dependent variable Y is classified as the number of closure delays, the selected measure of an effective closure.<sup>11</sup> This data is also classified as being at the ordinal level of measurement. The reason is that, although the amount of closure delays for Blaine AFS, 27, for example, can be considered as higher in value relative to the other sites' amounts, there is not yet available a method of measuring the distance-value of one site's total amount relative to any other site's amount (18:4,5). Because of the applicability of the Spearman's Rank Correlation Coefficient ( $r_s$ ) for testing the correlation of two variables when the data can at least be collected at the ordinal level, it was used for testing the following hypotheses:

H<sub>0</sub>: The effectiveness of the closure process (as measured by the amount of closure delays) is not associated with the completeness of planning (as measured by the amount of omissions in the PAD).

---

<sup>11</sup>The use of an independent and a dependent variable in correlation analysis is not considered standard convention. The intent here is to conceptualize the two variables in question on the basis of a time continuum. With this in mind, the planning completeness variable is normally considered first, the closure delay variable second, and thus dependent on the first. Thus, the use of the term "theoretical variable."

$H_1$ : There is an association between these two variables.

As references in Chapter II, the  $r_2$  value of the Spearman's correlation coefficient test is used to determine the level of significance at which the null hypothesis can be rejected. This is accomplished by computing a student's t-statistic using the following equation:

$$t = r_s \sqrt{\frac{N-2}{1-r_s^2}}$$

where:  $N$  = sample size, and

$r_s$  = Spearman's correlation coefficient.

For this test,  $r_s = 0.8326$  (see Table 19), and  $N=11$ . Calculating the formula gives:

$$t = .8326 \sqrt{\frac{11-2}{1-(.8326)^2}}$$

$$t = 4.504$$

Chapter II further explained that this computed t-statistic is then compared to Siegel's table of critical t-values (80:248). This table provides for a critical t-value of 4.437 at a level of significance of .001 for a two-tailed test with 11 degrees of freedom. The computed t-value of 4.504 is greater than the critical t-value of 4.437 in this

TABLE 19  
SPEARMAN CORRELATION COEFFICIENTS

PAGE 14

04/28/80

REGRESSION FOR THESIS

FILE GCK11 (CREATION DATE = 04/28/80) PAD OMISSIONS-CLOSURE DELAYS

----- SPEARMAN CORRELATION COEFFICIENTS -----

VARIABLE PAIR	VARIABLE PAIR	VARIABLE PAIR	VARIABLE PAIR

X 0.8326  
WITH N( 11)  
Y SIG .001

A VALUE OF 99.0000 IS PRINTED IF A COEFFICIENT CANNOT BE COMPUTED.

test. Therefore, the null hypothesis can be rejected at a significance level of .001 (i.e.,  $\alpha=.001$ ).

### Conclusion

It can be concluded, then, that the null hypothesis, which states that there is no association between the two variables in question (closure delays and PAD omissions) can be rejected. Additionally, it can be assumed that there is more than a chance relationship between these variables and thus there is a relationship between the effectiveness of the closure process and the completeness of planning.

### Summary

In reply to the telephone interviews conducted utilizing the questions in Appendix C, this chapter presented possible objectives and measurements pertinent to a small unit deactivation. The hypothesis that management position is not independent of the process of establishing the objectives for an effective closure was verified. Thus, the conclusion was reached that the perspectives of HQ personnel and site commanders in establishing these objectives were not significantly different. Personal opinions from the respondents to the questionnaire on closure objectives were listed for the reader's edification and possible use. At the close of the chapter, the association between

the objectives of an effective closure and the completeness of planning were analyzed. The conclusion was reached that there is significant correlation between the measures of these variables and that their relationship is more than chance.



## CHAPTER V

### CONCLUSIONS AND RECOMMENDATIONS

#### Introduction

The beginning of this chapter presents conclusions to each of the research questions raised in this thesis. This discussion is followed by recommended management actions and further research suggestions pertaining to the planning of small Air Force unit deactivations.

#### Thesis Conclusions

As a result of the research, the following conclusions pertaining to each of the research questions are advanced:

1. Research Question One: What agencies/functional areas must be considered and involved in the development of a complete PAD?

#### Conclusions:

- a. HQ ADCOM's method of establishing what agencies/functional areas should be involved in the planning process was not comprehensive enough to include all necessary agencies. This was evident by the lack of meaningful inputs in the budget area. The OPR for PAD development should study the mission and organizational structure of the closing site to determine the functional areas

(e.g., budget, supply, and radar maintenance) that should be addressed in the PAD.

b. If time allows, the development of the PAD should be a joint effort between all affected parties-- (e.g., MAJCOM, intermediate headquarters, host base, AAFES, AFCOMS, and the site commander. No attempt was made by HQ ADCOM (in most cases) to include any other level of management in the planning process).

c. Advanced planning trips to the deactivating unit by headquarters or host base personnel is desirable, especially if extensive coordination is required for accomplishing tasks (e.g., the development of facility closure plans by civil engineering, personnel briefings, and joint supply inventories). HQ ADCOM did not use this management practice with any regularity. Supply inventory visits were used throughout although an audit report criticized their timeliness and effectiveness, and the development of civil engineering FCPs was stopped during the process. Consequently, the planning process was incomplete in many respects.

2. Research Question Two: What specific regulations and procedures must be considered and included in a complete PAD?

Conclusions:

a. The development of the PADs for the ADCOM radar sites in this study was irregular at best. In many

cases, the PAD of the latest closure was merely updated with new suspense dates. In some instances, very little thought went into new contingencies which might arise with the next closure.

b. A good overview section of the PAD is extremely important. Recommended items to be included in this section are contained in Chapter III.

c. To insure that all required actions are accomplished in a timely manner, the PAD should provide detailed instructions along with appropriate regulations and manual references for each functional area involved. Suggested guidance is outlined in Chapter III.

c. Key interdependencies should be displayed in the PAD so that all involved personnel (e.g., headquarters, host base, and site) will appreciate the impact of their actions on the overall closure process. Accomplishing this will assist in local planning and the prevention of potential problems and delays. An excellent way to show these interdependencies is through development of a PERT chart or a flow diagram as outlined in Chapter III and Appendix F.

d. Personnel involved in the planning of a site deactivation should refer to available historical data concerning other site closures so that the experiences learned from past closures are applied to the closure at hand. Documents referenced should include, for example,

previously published PADs, audit reports, and lessons learned letters. Additionally, those key personnel involved in previous site closures should be queried, if practical, to obtain their insights into the closure process.

3. Research Question Three: To what degree has the value of the planning variable changed over time:

Conclusion: Based on the frequency of PAD omissions for the 11 ADCOM/ADTAC long-range radar sites studied in this thesis from Antigo AFS, WI, which closed 1 July 1977 to Watertown AFS, NY, which closed 30 December, 1979, the quality of closure planning in terms of its completeness has not improved over time.

4. Research Question Four. What objectives constitute an effective closure?

Conclusion: Based on the research, we feel that the following represent the objectives which should be met in deactivating a small Air Force site:

- a. Close the site within budgetary constraints.
- b. Redistribute the site's material assets in a timely manner.
- c. Effectively employ remaining personnel while transferring excess personnel in a timely manner.
- d. Meet the overall closure date and accomplish individual PAD actions by the appropriate suspense dates.

- e. Achieve an orderly transition of the site to the gaining agency.
- f. Insure that advanced planning is thoroughly accomplished.
- g. Maintain mission effectiveness until operations are terminated.
- h. Protect and secure remaining government assets.

These objectives are very general in nature and thus were hard to measure. There is a need for the MAJCOM to develop operational definitions for these objectives, and to determine how, in fact, each of these objectives can be precisely measured to permit decisions to be made in correcting deviations from the standards developed in the operational definitions.

5. Research Question Five: What is the degree of agreement between headquarters personnel and site commanders as to what constitutes an effective closure?

Conclusion: As a result of the  $\chi^2$  test, it was concluded that the higher headquarters group and site commanders sampled appear to be in substantial agreement as to which objectives should be achieved in a site closure.

6. Research Proposition: Investigate the hypothesis that the effectiveness of the closure process is associated with the completeness of planning.

Conclusion: A significant correlation coefficient of .8326 was computed for the association between these two variables. This pointed to a strong correlation between them, one that was not based on chance.

#### Recommendations for Management

Specific recommendations for managers to follow in planning a small unit deactivation are:

1. HQ USAF or MAJCOM should translate broad goals into specific objectives pertinent to each closure.
2. A formal system should be established to measure progress towards accomplishing each of the stated objectives.
3. The closure PAD, as developed in this thesis, should specify the operational and related activities which, if accomplished, will result in meeting the closure objectives. This thesis could be used as a basis for planning future closures of small-size Air Force units irregardless of the mission of the affected site. It should be remembered though that each closure is unique and that the instructions in one PAD probably cannot be transferred in total to another site which is also closing, even if the missions of the two sites are similar. Some important considerations in developing closure PADs are:
  - a. Review laws, environmental impacts, regulations, and other constraints which affect the closure

process. This should assist in determining the proper allocations of financial, manpower, and materiel resources within the imposed constraints.

b. Insure the proper sequencing of activities and the clear identification of interdependencies (e.g., the use of PERT or flowcharts).

4. Establish a feedback system to insure the early detection and resolution of problems and to facilitate the measurement of the objectives.

5. Management at all levels should be sensitive to the necessity of communicating and sharing on a timely basis information with all affected agencies.

#### Suggested Research

The following research efforts should be considered because of their potential for improving the effectiveness of the small-unit closure process:

1. An analysis could not be conducted on seven of the eight objectives identified in this study due to a lack of existing objective and operationally-defined effectiveness measures. Research should attempt to define operational measures for each of these stated objectives. Then, for example, correlations between these measures and planning completeness (quality) could be accomplished.

2. As discussed in Chapter I, various persons stated that other variables may have a significant impact

on closure effectiveness besides planning completeness.

These other variables included:

- a. MAJCOM management attention.
- b. Site commander's managerial abilities.
- c. Capabilities of subordinate supervisors and workers.
- d. Political and socioeconomic considerations.
- e. Geographic closeness of the site to its host base.
- f. Time constraints imposed by higher headquarters.

Research should be conducted to determine how these other variables interact with each other to affect the completeness of closure planning.

#### Summary

As mentioned in the very beginning of this thesis, the Air Force is expected to spend judiciously the financial resources entrusted to it. Furthermore, the Air Force appears to be faced with increasing costs brought upon by inflation and the continual need to improve its mission capability. The recommendations and suggestions outlined above and explained in detail throughout this thesis could contribute to the Air Force's goal of effectively using its resources while maintaining a fighting force second to none.



APPENDICES

APPENDIX A

TELEPHONE INTERVIEW INSTRUMENT FOR THE IDENTIFICATION  
OF THE NECESSARY INPUTS TO A COMPLETELY PLANNED PAD

1. Background questions:
  - a. Name
  - b. Rank
  - c. Title and Organization (to include office symbol)
  - d. Date
2. Questions pertaining to the necessary inputs to a completely planned PAD.
  - a. What inputs pertaining to your area of responsibility should be included in PADs being developed for the closure of radar sites under the JSS concept?
  - b. Is there a regulation or manual which requires this to be included in the PAD? If so, what is it?
  - c. In what manner is your portion of the PAD developed?

APPENDIX B  
SAMPLE LETTER

FROM: Maj Harvey/785-4437

SUBJECT: Request for Information Concerning Radar Site  
Closures

TO:

1. Captain George C. Kiessling and I are graduate students at the Air Force Institute of Technology, Wright-Patterson AFB, Ohio. In partial fulfillment of the requirements for our degrees we are writing a thesis to investigate the manner in which the planning for the closure of a small Air Force unit (e.g., a radar site) affects the subsequent effectiveness of the closure process.

2. To assist us in this endeavor, we are requesting your opinions on the questions listed in attachment one. You have been chosen because of your experience and knowledge of the procedures which must be followed in deactivating a radar site or other small USAF unit. Your opinions could prove to be invaluable to the Air Force in planning more effective closures in the future.

3. Our intention is to contact you within a couple of weeks by telephone. However, we are providing these questions beforehand to give you sufficient time to study them and prepare your answers. Individual responses will be kept confidential and are solicited on a voluntary basis.

4. If you have any particular questions please contact Captain Kiessling or me at Autovon 785-4437. Your cooperation in this matter will be deeply appreciated.

ROBERT J. HARVEY, Maj, USAF  
AFIT Graduate Student

1 ATCH  
Closure Questions

APPENDIX C

TELEPHONE INTERVIEW INSTRUMENT FOR THE  
IDENTIFICATION AND MEASUREMENT OF THE  
OBJECTIVES OF AN EFFECTIVE CLOSURE

1. Background questions:
  - a. Name
  - b. Grade or Rank
  - c. Title and Organization (to include office symbol)
  - d. Date
2. Reexplain the purpose of the interview as explained in the introductory letter.
3. Questions pertaining to the identification and management of the objectives of an effective closure:
  - a. What do you consider are the objectives which should be accomplished in deactivating a small Air Force installation such as a radar site?
  - b. How would you measure each of these objectives, or, in other words, how would you track the accomplishment of these objectives to insure completion, either formally or informally? An example of a formal method would be a qualitative or quantitative report established by regulation or operating instruction. An example of an informal method would be your personal system for monitoring the accomplishment of the objective.
  - c. What actions taken in deactivating ADCOM radar sites have significantly contributed to successful closures and should be replicated in future Programmed Action Directives (PADs)?

- d. Do you have any suggestions for improving the quality of the PADs or the planning process for site closures?
- e. What have been the main problems you have experienced in deactivating radar sites?
- f. General comments.



APPENDIX D  
SAMPLE ADCOM PROGRAMMED ACTION DIRECTIVE

SYSTEM CONTROL PLAN					START DATE
ADCOM PROJECT OFFICE		TITLE			
SYSTEM DESCRIPTION		ADCOM PAD 78-21 - Annex A			
		Inactivation 763 RADS, Lockport AFS NY			KEY COMPLETION DATE
NUMBER	ACTIONS REQUIRED	STARTING DATE	COMPLETION DATE	RESPONSIBLE AGENCY (ADCOM/Agency)	
LGS - 21	Submit requirement (AF Form 601a) for vehicle support for GATR to ADCOM/LGSE.	Immediate	1 Feb 79	763 RADS/ LGS (LGSE)	
LGS - 22	Determine and provide ADCOM/LGSE a list of equipment requirements for caretaker force and housing requirements.	Immediate	1 Apr 79	763 RADS/ LGS (LGSE)	
LGS - 23	Cancel outstanding supply due-outs at host base. Consider caretaker requirements.	1 Mar 79	1 Apr 79	763 RADS/ LGS (LGSN)	
LGS - 24	Identify and provide the RADS a list of all test equipment and special tools required for transfer to holding account. Calibration requirements are waived during period equipment is in hold status.	1 Apr 78	1 Jun 79	LGSE	
LGS - 25	Provide RADS final disposition instructions on all remaining excess equipment, including PCSP equipment.	1 Apr 79	1 Jun 79	LGSE	
LGS - 26	Insure all NOGAS is consumed 30 days prior to closure of the installation. Locally procure NOGAS required for last 30 days. Drawdown of WRN and other required levels are authorized. Report excess inventory to ADCOM/LGSE.	1 May 79	1 Jun 79	763 RADS/ CC/LGS (LGSE)	

ADCOM FORM 203  
REPLACES ADC FORM 203, FEB 67  
WHICH WILL BE USED

APPENDIX E

SAMPLE ADCOM FORM 193 PROGRAM PROGRESS/  
REVISION REPORT

PROGRAM PROGRESS/REVISION REPORT					AS OF DATE		REPORT CONTROL SYMBOL	
					16 Oct 79		RCS: ADCOM:XPXP(SM) 7102	
TO: HQ ADCOM/ xpxp PETERSON AFB CO 80914			THRU: (Intermediate headquarters, if appl)			FROM: 23AD SAGE SQ OLCX Sault Ste Marie AFS, MI		
PAD NUMBER AND TITLE: Sault Ste Marie AFS, MI 79-12 Inactivation of 23AD SAGE SQ OLCX					PROGRAM DESIGNATION			
ITEM NO. A	OPR B	TYPE OF CHANGE			DATE OF CHANGE OR RESCHEDULE		DATE COMPLETED H	
		ACTUAL SLIPAGE C	DESCHED D	OTHER E	FROM F	TO G		
INX-3	LGKS/DO	X			30 Sep 79	5 Oct 79	5 Oct 79	
KR-7	KRCSS						2 Oct 79	
LGK-4	LGKS						15 Oct 79	
LGK-7	LGKS						4 Oct 79	
LGK-8	LGKS						1 Oct 79	
LGK-9	LGKS						4 Oct 79	
LGK-11	LGKS						9 Oct 79	
SG-8	SG						30 Sep 79	
SP-5	SP		X		30 Jun 80	31 Oct 79		
SP-7	SP						15 Oct 79	

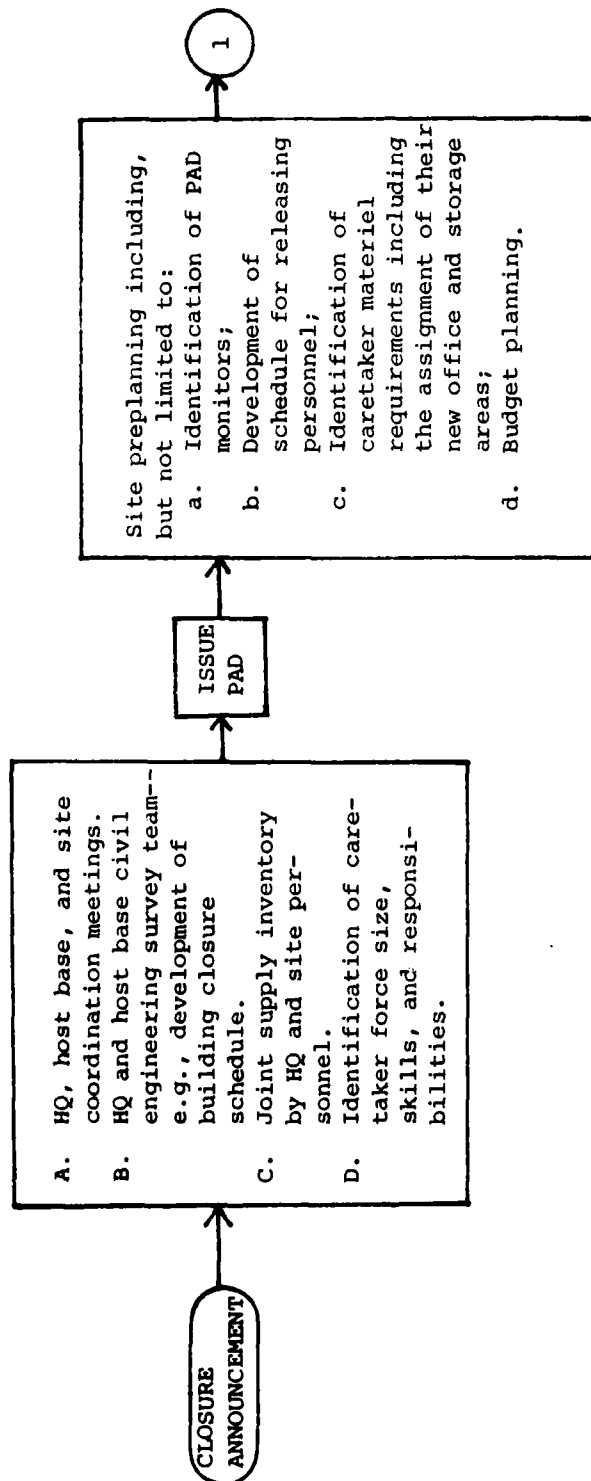
REMARKS

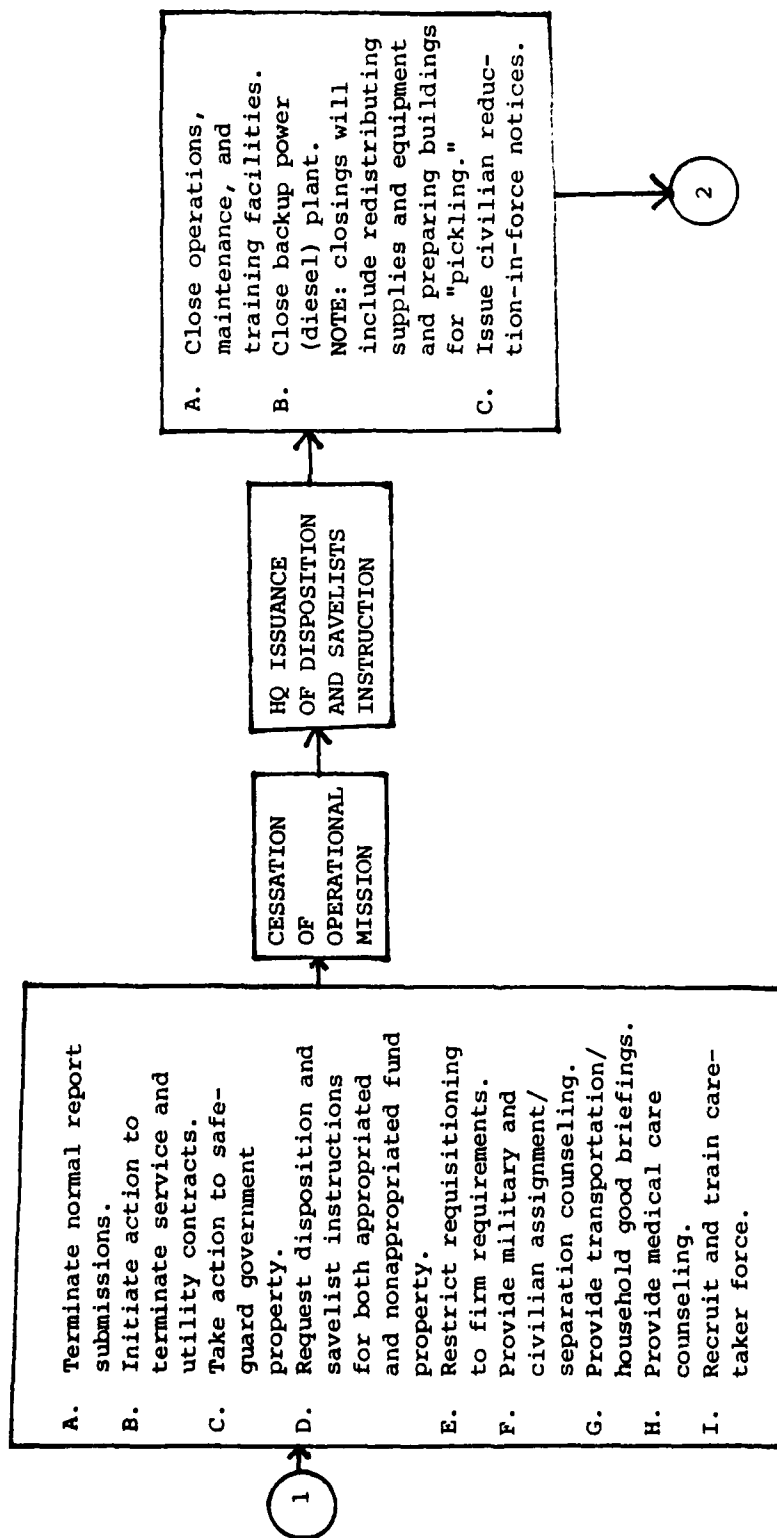
1. Ref INX-3 Took more time for actual handling and destruction.
2. Ref SP-5 Time changed back to original date. Had been canged due to misunderstanding.

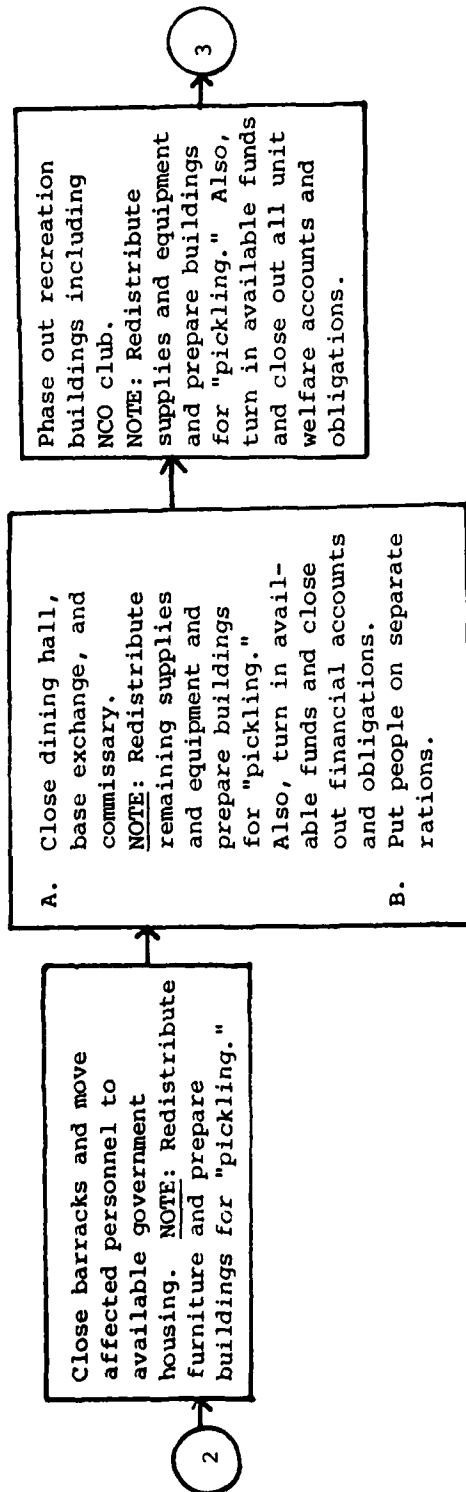
Cy to: 23AD/LG

FORM 193  
ADCOM OCT 79 193 PREVIOUS EDITIONS  
WILL BE USED.

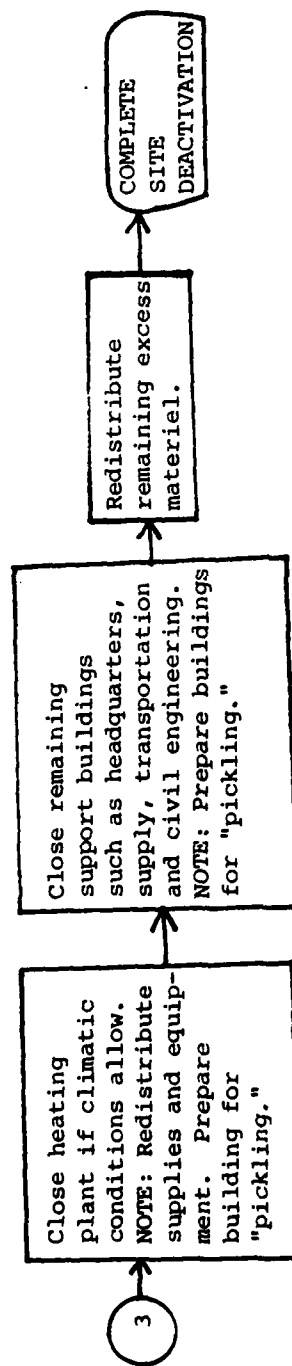
APPENDIX F  
PROCESS CHART FOR SMALL UNIT DEACTIVATION











APPENDIX G  
SPSS PROGRAM FORMATS

```

010NWS,R(SL) : ,8,16;;,16
020#:IDENT:WP1186, AFIT-LS CAPT KIESSLING,STU
030#:SELECT:SPSS/SPSS
040RUN NAME;AGREEMENT ANALYSIS
050FILE NAME;GCK55,DEGREE OF AGREEMENT
060VARIABLE LIST;GROUP,OBJECTIVE
070INPUT FORMAT;FREEFIELD
080INPUT MEDIUM;CARD
090N OF CASES;80
100VAR LABELS;GROUP,GROUP RESPONDING
110;OBJECTIVE,OBJECTIVES OF AN EFFECTIVE CLOSURE
120VALUE LABELS;GROUP(1)HQ PERSONNEL(2)COMMANDERS/
130;OBJECTIVE(1)SAVE MONEY(2)MOVE MATERIEL(3)MOVE PEOPLE
140;(4)CLOSE ON TIME(5)TRANSITION(6)PLANS(7)MISSION
150;(8)PROPERTY SECURE
160CROSSTABS;VARIABLES=GROUP(1,2)OBJECTIVE(1,8)/
170;TABLES=GROUP BY OBJECTIVE
180STATISTICS;ALL
190READ INPUT DATA
200#:SELECTA:GCK59
210FREQUENCIES;GENERAL=ALL
220OPTIONS;8
230FINISH
240#:ENDJOB

```

SPSS Format for  $\chi^2$  Test of Degree of Agreement

```

010NWS,R(SL) : ,8,16;;,16
020#:IDENT:WP1186,AFIT-LS CAPT KIESSLING,STU
030#:SELECT:SPSS/SPSS
040RUN NAME;REGRESSION FOR THESIS
050FILE NAME;GCK11,PAD OMISSIONS-CLOSURE DELAYS
060VARIABLE LIST;X,Y
070INPUT FORMAT;FREEFIELD
080INPUT MEDIUM;CARD
090N OF CASES;11
100VAR LABELS;X,PAD OMISSIONS
110VAR LABELS;Y,CLOSURE DELAYS
120REGRESSION;VARIABLES=X,Y/
130;REGRESSION=Y WITH X(2) RESID=0
140STATISTICS;ALL
150READ INPUT DATA
160#:SELECTA:80A014/GCK1,R
170SCATTERGRAM;Y(0,40) WITH X(15,50)
180NONPAR CORR;X,Y
190OPTIONS;1,2,3,6
200FINISH
210#:ENDJOB

```

SPSS Format for Spearman's Rank Correlation Coefficient

APPENDIX H  
CRITICAL VALUES FOR  $\chi^2$

TABLE B. TABLE OF CRITICAL VALUES OF  $t^*$ 

df	Level of significance for one-tailed test					
	.10	.05	.025	.01	.005	.0005
	Level of significance for two-tailed test					
	.20	.10	.05	.02	.01	.001
1	3.078	6.314	12.706	31.821	63.657	636.619
2	1.886	2.920	4.303	6.965	9.925	31.598
3	1.638	2.353	3.182	4.541	5.841	12.941
4	1.533	2.132	2.776	3.747	4.604	8.610
5	1.476	2.015	2.571	3.365	4.032	6.859
6	1.440	1.943	2.447	3.143	3.707	5.959
7	1.415	1.895	2.365	2.998	3.499	5.405
8	1.397	1.860	2.306	2.896	3.355	5.041
9	1.383	1.833	2.262	2.821	3.250	4.781
10	1.372	1.812	2.228	2.764	3.169	4.587
11	1.363	1.796	2.201	2.718	3.106	4.437
12	1.356	1.782	2.179	2.681	3.055	4.318
13	1.350	1.771	2.160	2.650	3.012	4.221
14	1.345	1.761	2.145	2.624	2.977	4.140
15	1.341	1.753	2.131	2.602	2.947	4.073
16	1.337	1.746	2.120	2.583	2.921	4.015
17	1.333	1.740	2.110	2.567	2.898	3.965
18	1.330	1.734	2.101	2.552	2.878	3.922
19	1.328	1.729	2.093	2.539	2.861	3.883
20	1.325	1.725	2.086	2.528	2.845	3.850
21	1.323	1.721	2.080	2.518	2.831	3.819
22	1.321	1.717	2.074	2.508	2.819	3.792
23	1.319	1.714	2.069	2.500	2.807	3.767
24	1.318	1.711	2.064	2.492	2.797	3.745
25	1.316	1.708	2.060	2.485	2.787	3.725
26	1.315	1.706	2.056	2.479	2.779	3.707
27	1.314	1.703	2.052	2.473	2.771	3.690
28	1.313	1.701	2.048	2.467	2.763	3.674
29	1.311	1.699	2.045	2.462	2.756	3.659
30	1.310	1.697	2.042	2.457	2.750	3.646
40	1.303	1.684	2.021	2.423	2.704	3.551
60	1.296	1.671	2.000	2.390	2.660	3.460
120	1.289	1.658	1.980	2.358	2.617	3.373
$\infty$	1.282	1.645	1.960	2.326	2.576	3.291

\* Table B is abridged from Table III of Fisher and Yates: *Statistical tables for biological, agricultural, and medical research*, published by Oliver and Boyd Ltd., Edinburgh, by permission of the authors and publishers.

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